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# SEED TRADE BUYERS GUIDE & DIRECTORY

• 1933 •

PUBLISHED **SEED WORLD** CHICAGO  
BY 325 W. HURON ST. ILL.

SIXTEENTH EDITION

*Kenneth H. Hoff*

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# **ALFRED J. BROWN SEED COMPANY**

**Grand Rapids**

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# Seed Trade Buyer's Guide

Registered U. S. Patent Office

## For 1933

Compiled and Published to Promote Better Business for  
Seed Merchants Everywhere.

Containing Classified Listings of Seed Growers, Wholesalers,  
Manufacturers of Equipment, Supplies and  
Side-Line Merchandise.

Containing an Alphabetical List of Trade Marks and Slogans  
Used by Seedsmen and Manufacturers of Allied Lines

Containing Five Charts of Common Weed Seeds, Tables of  
Seed Exports and Imports, Tariff Rates, Planting and  
Spraying Tables, Information on Sidelines and  
Other Data of Interest to the Seed Trade.  
For Index Refer to Page 4.

It has been the endeavor of the publishers to limit the listings  
to actual growers, wholesalers or manufacturers who  
are generally recognized in the trade as being  
privileged to such classification. For index  
refer to page 4.

The publication of this book is made possible through the  
support of the advertisers whose names appear in  
black face type in the directory section.

(Advertisers' Index page 164)

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QUOTATIONS WILLINGLY SUBMITTED

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Office: BRISTOL, PENNSYLVANIA

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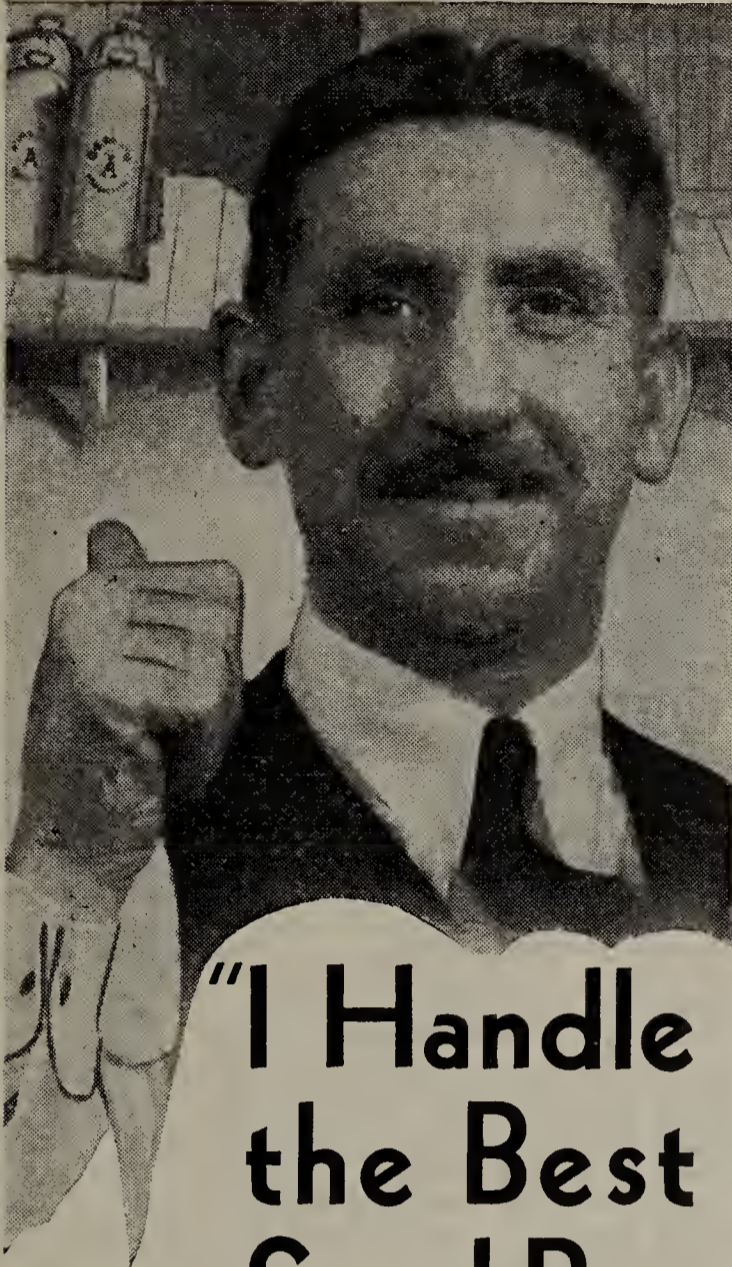
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Early Fortune

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# NOXIOUS WEED SEEDS

PRACTICALLY all of the State Seed Laws name some noxious weed seeds. The sale of agricultural seed containing any of the noxious weed seeds is prohibited in some of the states. Most states, however, allow a very small percentage to be present. Regulations vary in the different states. Any seedsman interested in the regulations of any particular state should write directly to that state for a copy of the seed law. (See table on page 35.)

Alabama . . . . .	Wild Onion, Bermuda Grass, Quack Grass, Dodder, Johnson Grass, Nut Grass, Canada Thistle, Hawkweed, Corn Cockle, Chicory.
Arizona . . . . .	Dodders, Russian Thistle, Johnson Grass, Bermuda Grass, Florida Nut Grass, Wild Mustard, Careless Weed, Wild Oats, Lamb's Quarter, Wild Barley, Rag Weed, Burr Grasses.
Arkansas . . . . .	Dodders, Buckhorn, Plantains, Sorrels, Docks, Cheat, Red Rice, Wild Carrot, Wild Onion, Thistle, Nut Grass Johnson Grass, Whitetop.
California* . . . .	Johnson Grass, Camel's Thorn, Hoary Cress, Morning Glory, Canada Thistle, Russian Knapweed.
Colorado . . . . .	Dodders, Wild Oats, Plantains, Bindweed, Poverty Weed, Crab Grass, Cheat, Canada Thistle, Cockle, Sow Thistle, Wild Barley, Hopelover.
Connecticut . . . .	Quack Grass, Canada Thistle, Plantain, Hawkweed, Dodder, Curled Dock.
Delaware . . . . .	Quack Grass, Canada Thistle, Dodders, Wild Mustard, Wild Oats, Orange Hawkweed.
Idaho . . . . .	Wild Mustards, Quack Grass, Canada Thistle, Wild Oats, Dodders, Corn Cockle, Buckhorn Plantain, Bracter Plantain, Perennial Sow Thistle, French Weed, Hoary Cress, Wild Morning Glory, Spurge, Puncture Vine, Yellow Toadflax, Russian Knapweed.
Illinois . . . . .	Canada Thistle, Quack Grass, Wild Mustard, Wild Carrot, Dodder, Dock, Buckhorn Plantain, Ox-eye Daisy, Field Sorrel, Johnson Grass.
Indiana . . . . .	Buckhorn, Bracted Plantain, Canada Thistle, Chicory, Common Plantain, Corn Cockle, Curled Dock, Dodder, Horse Nettle, Mustard, Ox-eye Daisy, Prickly Lettuce, Quack Grass, Red Sorrel, Whitetop, Wild Carrot, Wild Onion, Yellow Trefoil.
Iowa . . . . .	Wild Mustard, Indian Mustard, Sow Thistle, Dock, Wild Oat, Corn Cockle, Sheep Sorrel, Canada Thistle, Quack Grass, Buckhorn, Wild Carrot, Horse Nettle, Dodder.
Kansas . . . . .	Dodders, Johnson Grass, Field Bindweed, Canada Thistle, Corn Cock, Buckhorn Plantain, Wild Mustard, French Weed, Quack Grass, Wild Parsnips, Wild Onions.
Kentucky . . . . .	Quack Grass, Dodders, Sorrel, Buckhorn, Corn Cockle, Wild Onion, Canada Thistle.
Louisiana . . . . .	Not specified in law—determined by State Department of Agriculture.
Maine . . . . .	None listed in law itself—large list named in Bulletins.
Maryland . . . . .	Wild Onion, Bermuda Grass, Quack Grass, Dodder, Canada Thistle, Hawkweed, Chicory.
Massachusetts . . .	Dodder, Quack Grass, Wild Mustard, Canada Thistle.
Michigan . . . . .	Quack Grass, Dodders, Canada Thistle, Wild Carrot, Mustards.
Minnesota . . . . .	Quack Grass, Canada Thistle, Perennial Sow Thistle, Dodders, Leafy Spurge, Ox-eye Daisy, Buckhorn Plantain.
Mississippi . . . . .	Wild Onion, Bermuda Grass, Quack Grass, Dodder, Johnson Grass, Nut Grass, Canada Thistle, Hawkweed, Corn Cockle, Chicory.
Missouri . . . . .	Quack Grass, Dodders, Russian Thistle, Wild Carrot, Sorrels, Docks, Wild Onion, Buckhorn and other varieties of Plantain.
Montana . . . . .	Quack Grass, Fan Weed, Wild Oats, Dodder, Canada Thistle.
Nebraska . . . . .	Small Flowered Morning Glory, Wild Mustard, Quack Grass, Wild Oats, Dodders.
Nevada . . . . .	Dodder, Star Thistle, Thistles, Russian Thistle, Hoary Cress, Morning Glory, Johnson Grass, Nut Grass, Creeping Mallow, St. Johnswort, Dandelion, Water Cress, Puncture Vine, Mustard.
New Hampshire . . .	No noxious weeds named.
New Jersey . . . . .	Canada Thistle, Dodders, Quack Grass, Horse Nettle, Russian Knapweed.
New Mexico . . . .	Quack Grass, Fan Weed, Mustard, Wild Oats, Dodder.
New York . . . . .	Quack Grass, Wild Mustards, Canada Thistle, Dodder, Crab Grasses, Docks.
North Carolina . . .	Wild Onion, Wild Garlic, Dodder, Wild Oats, Corn Cockle, Cheat.
North Dakota . . . .	Quack Grass, Canada Thistle, Perennial Sow Thistle, Dodder, Leafy Spurge, Field Bindweed.
Ohio . . . . .	Canada Thistle, Wild Onion, Quack Grass, Dodders, Plantains, Wild Carrot, Ox-eye Daisy, Corn Cockle, Docks, Chicory.
Oklahoma . . . . .	Dodder, Russian Thistle, Bind Weed, Johnson Grass, Canada Thistle, Perennial Bull Nettle.

## NOXIOUS WEED SEEDS—Continued

Oregon.....	Charlock, Dodder, Wild Oats, Corn Cockle, Canada Thistle, Quack Grass.
Pennsylvania...	Wild Onion, Quack Grass, Canada Thistle, Devil's Paint Brush, King Devil, Perennial Sow Thistle, Horse Nettle, Bindweed.
Rhode Island..	Quack Grass, Canada Thistle, Didders, Wild Mustards, Crab Grasses, Docks, Corn Cockle, Buckhorn, Wild Carrot.
South Carolina.	Clover Dodder, Field Dodder, White Mustard, Wild Oats.
South Dakota..	Quack Grass, Canada Thistle, Dodder.
Tennessee.....	Wild Mustard, Quack Grass, Canada Thistle, Wild Oats, Didders, Cockle, Sour Dock, Ox-eye Daisy, Wild Onion, Johnson Grass.
Texas.....	Dodder, Johnson Grass, Russian Thistle, Bindweed, Blue Weed, Wire Grass, Bermuda Grass.
Utah.....	Mustard, Whitetop, Plantain, Dodder, Canada Thistle, Wild Oats, Bull Thistle, Ragweed, Wild Morning Glory, Burdock.
Vermont.....	Quack Grass, Mustards, Canada Thistle, Dodder, Ergot, Corn Cockle, Poison Hemlock.
Virginia.....	Quack Grass, Wild Onion Bulblets, Canada Thistle, Dodder, Bermuda Grass, Hawkweed, Perennial Sow Thistle, Johnson Grass.
Washington....	Quack Grass, Dodder, Fan Weed, Wild Morning Glory, Canada Thistle, Corn Cockle, Russian Thistle, Charlock, Jim Hill Mustard, Buckhorn Plantain, Darnel, Perennial Sow Thistle.
West Virginia..	Wild Onion, Johnson Grass, Quack Grass, Canada Thistle, Hawkweed, Buckhorn, Sow Thistle, Wild Mustard, Corn Cockle, Ox-eye Daisy, Indian Mustard, Star Thistle, Wild Carrot, Galinsoga.
Wisconsin.....	Canada Thistle, Quack Grass, Didders, Wild and Indian Mustard, Buckhorn, Wild Oats, Corn Cockle, Ox-eye Daisy, Snapdragon, Sow Thistle.
Wyoming*.....	Wild Mustard, Quack Grass, Canada Thistle, Corncock, Dodder.

\*Other secondary noxious weed seeds named.

## Officers of Seed Trade Associations—1932-1933

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## PLATE 1.—NOXIOUS WEED SEEDS FOUND IN FARM SEEDS



## Common and Botanical Names. 1—Color. 2—Appearance Under Low-power Lens

- a. Sandbur, *Cenchrus tribuloides*, (1) Light brown or straw, (2) Dull.
- b. Wild oat, *Avena fatua*, (1) Straw or brown, (2) Smooth.
- c. Chess or cheat, *Bromus secalinus*, (1) Straw, (2) Somewhat wrinkled.
- d. Darnel, *Lolium temulentum*, (1) Straw or brown, (2) Smooth; sometimes shiny.
- e. Quack-grass, *Agropyron repens*, (1) Light yellow, sometimes greenish, (2) Dull.
- f. Curled dock, *Rumex crispus*, (1) Reddish brown, (2) Smooth and shiny.
- g. Black bindweed, *Polygonum convolvulus*, (1) Brown, straw or greenish in coat; out of coat, black, and (2) somewhat shiny.
- h. Russian thistle, *Salsola tragus*, (1) Grey or brown.
- i. Corn cockle, *Agrostemma githago*, (1) Black, (2) Rough.
- j. White campion, *Lychnis alba*, (1) Grey, yellowish grey or reddish grey, (2) Fine spines or tubercles.
- k. Bladder campion, *Silene vulgaris*, (1) Brown or approaching black, (2) Fine spines or tubercles.
- l. Night-flowering catchfly, *Silene noctiflora*, (1) Similar to that of "j," (2) Fine spines or tubercles.
- m. Cow Cockle, *Vaccaria vaccaria*, (1) Black, (2) Faintly warted.
- n. Pennycress, *Thlaspi arvense*, (1) Reddish brown, (2) concentric shining ridges.
- o. Field peppergrass, *Lepidium campestre*, (1) Reddish brown, (2) Dull or finely granular.
- p. Large-fruited false flax, *Camelina sativa*, (1) Light yellow or orange, (2) Waxy.
- q. Small-fruited false flax, *Camelina microcarpa*, (1) Dark red, (2) Dull; finely granular.
- r. Ball mustard, *Neslia paniculata*, (1) Straw colored or brown, (2) Network of ridges.
- s. Black mustard, *Brassica nigra*, (1) Reddish or dark brown, (2) Network of ridges.
- t. Charlock, *Brassica arvensis*, (1) Black or reddish brown, (2) Dull; grey lustre.

—Bureau of Plant Industry, U. S. Dept. of Agric.

## PLATE 2.—NOXIOUS WEED SEEDS FOUND IN FARM SEEDS



## Common and Botanical Names. 1—Color. 2—Appearance Under Low-power Lens

- a. Indian mustard, *Brassica juncea*, (1) Reddish brown, (2) Network of ridges.  
b. Hare's-ear mustard, *Conringia orientalis*, (1) Brown or reddish brown, (2) Granular.  
c. Tumbling mustard, *Sisymbrium altissimum*, (1) Orange or dull brown, (2) Waxy.  
d. Wild carrot, *Daucus carota*, (1) Light brown, (2) Ridges with spines.  
e. Field bindweed, *Convolvulus arvensis*, (1) Dull brown, (2) Roughened.  
f. Flax dodder, *Cuscuta epilinum*, (1) Grey or brownish grey, (2) Granular.  
g. Clover dodder, *Cuscuta epithymum*, (1) Grey or brown, (2) Granular.  
h. Small-seeded alfalfa dodder, *Cuscuta planiflora*, (1) Yellowish, greenish or purplish, (2) Roughened or granular.  
i. Field dodder, *Cuscuta arvensis*, (1) Orange or yellowish brown, (2) Dull or granular.  
j. Large-seeded alfalfa dodder, *Cuscuta indecora*, (1) Grey, greenish or brown, (2) Roughened or granular.  
k. Corn gromwell, *Lithospermum arvense*, (1) Grey or brown, (2) Roughened or warty.  
l. Rugel's plantain, *Plantago Rugelii*, (1) Black, (2) Dull with minute glistening points.  
m. Buckhorn plantain, *Plantago lanceolata*, (1) Brown or amber, (2) Shiny on concave side; dull in groove.  
n. Ragweed, *Ambrosia artemisiaefolia*, (1) Light grey or brown, (2) Irregularly ridged.  
o. Gum-plum, *Grindelia squarrosa*, (1) Whitish or straw, (2) Vertically wrinkled.  
p. Sunflower, *Helianthus annuus*, (1) Grey or brown with black or dark mottlings, (2) Fine vertical wrinkles.  
q. Oxeye daisy, *Chrysanthemum leucanthemum*, (1) Brown or black with ten white vertical ribs.  
r. Canada thistle, *Carduus arvensis*, (1) Light or dark bronze, (2) Smooth.  
s. Bullthistle, *Carduus lanceolatus*, (1) Light grey or brown with darker vertical stripings, (2) Dull.  
t. Chicory, *Cichorium intybus*, (1) Brown or straw with dark spots, (2) Vertically wrinkled; finely webbed.

—Bureau of Plant Industry, U. S. Dept. of Agric.

## PLATE 3.—COMMON WEED SEEDS FOUND IN FARM SEEDS



## Common and Botanical Names. 1—Color. 2—Appearance Under Low-power Lens

- a. Crab-grass, *Syntherisma sanguinalis*, (1) Straw green, brown or purplish.  
 b. Witch-grass, *Panicum capillare*, (1) Straw or olive green, (2) Shining.  
 c. Yellow foxtail, *Chaetochloa glauca*, (1) Free from chaff, light or dark green, (2) Ridged crosswise.  
 d. Green foxtail, *Chaetochloa viridis*, (1) Free from chaff; straw or brown, sometimes mottled, (2) Ridged crosswise.  
 e. Velvet grass, *Holcus lanatus*, (1) Chaff, straw, (2) Having fine, stiffish hairs.  
 f. Soft chess, *Bromus hordeaceus*, (1) Straw, (2) Usually wrinkled.  
 g. Sedge, *Carex* sp., (1) Free from chaffy hull, light brown, (2) Smooth.  
 h. Sorrel, *Rumex acetosella*, (1) Free from hull, reddish brown, (2) Smooth and shining.  
 i. Knotweed, *Polygonum aviculare*, (1) Free from covering, reddish brown, (2) Dull.  
 j. Pale smartweed, *Polygonum lapathifolium*, (1) Chestnut brown, (2) Shining.  
 k. Lady's-thumb, *Polygonum persicaria*, (1) Black or reddish black, (2) Shining.  
 l. Lamb's-quarters, *Chenopodium album*, (1) Dark brown or black, (2) Shining.  
 m. Wild saltbush, *Atriplex truncata*, (1) Straw, (2) Veined into an imperfect network.  
 n. Rough pigweed, *Amaranthus retroflexus*, (1) Black, (2) Highly polished.  
 o. Spreading amaranth, *Amaranthus blitoides*, (1) Black, (2) Highly polished.  
 p. Spargula arvensis, Spurry, (1) Dull black, encircled by light colored rim, (2) Finely warted.  
 q. Chickweed, *Alsine graminea*, (1) Reddish brown or brown, (2) Crinkled appearance, caused by fine ridges.  
 r. Chickweed, *Alsine media*, (1) Reddish brown or brown, (2) Stitched appearance caused by tubercles.  
 s. Mouse-ear chickweed, *Cerastium vulgatum*, (1) Reddish brown, (2) Tubercled.  
 t. Forked catchfly, *Silene dichotoma*, (1) Reddish brown, (2) Fine spines or tubercles.

—Bureau of Plant Industry, U. S. Dept. of Agric.

## PLATE 4.—COMMON WEED SEEDS FOUND IN FARM SEEDS



## Common and Botanical Names. 1—Color. 2—Appearance Under Low-power Lens

- a. Creeping buttercup, *Ranunculus repens*, (1) Brown or reddish-brown, (2) Dull.
- b. Peppergrass, *Lepidium virginicum*, (1) Reddish yellow with papery rim, (2) Waxy or dull.
- c. Shepherd's-purse, *Bursa bursa-pastoris*, (1) Reddish yellow, (2) Waxy or dull.
- d. Cinquefoil, *Potentilla monspeliensis*, (1) Straw or brown, (2) With curved, forked ridges.
- e. Hop clover, *Trifolium procumbens*, (1) Yellowish, (2) Shining.
- f. Yellow trefoil, *Medicago lupulina*, (1) Yellowish brown or tinged with green, (2) Smooth.
- g. Bird's-foot trefoil, *Lotus corniculatus*, (1) Brown and mottled, (2) Smooth.
- h. Wild Geranium (cut-leaved crane's bill), *Geranium dissectum*, (1) and (2) Brown with light network.
- i. Wild Geranium (Dove's foot crane's bill), *Geranium molle*, (1) and (2) Often with a brown, ridged hull.
- j. Wild Geranium (Small-flowered crane's bill), *Geranium pusillum*, (1) Reddish brown, (2) Smooth.
- k. Alfilaria, *Erodium cicutarium*, (1) Seeds proper, brown, (2) Smooth.
- l. Spurge, *Euphorbia nutans*, (1) Steel-grey or brown, (2) Ridged into four angles; faces wrinkled.
- m. Spiny sida, *Sida spinosa*, (1) Brown, (2) Dull.
- n. Evening primrose, *Onagra biennis*, (1) Reddish brown, (2) Presenting wrinkled or shriveled appearance.
- o. Red Pimpernel, *Anagallis arvensis*, (1) Reddish brown, (2) Finely roughened.
- p. Sticktight, *Lappula lappula*, (1) Grey or brown, (2) With whitish warts and brown, barbed, prickles.
- q. Forget-me-not, *Myosotis arvensis*, (1) Black, (2) Shining.
- r. Vervain, *Verbena officinalis*, (1) Reddish or dark brown, (2) Veined on one side, angled on other.
- s. White Vervain, *Verbena urticaefolia*, (1) Reddish or dark brown, (2) Veined on one side, angled on other.
- t. Blue Vervain, *Verbena hastata*, (1) Reddish or dark brown, (2) Veined on one side, angled on other.

—Bureau of Plant Industry, U. S. Dept. of Agric.

## PLATE 5.—COMMON WEED SEEDS FOUND IN FARM SEEDS



## Common and Botanical Names. 1—Color. 2—Appearance Under Low-power Lens

- a. Catmint, *Nepeta cataria*, (1) Reddish or dark brown, (2) Smooth and dull.
- b. Healall, *Prunella vulgaris*, (1) Light to dark brown, (2) Slightly roughened, having a diffused lustre.
- c. Rough-leaved toad flax, *Elatinoides spuria*, (1) Light Brown, (2) Wrinkled.
- d. Plantain, *Plantago major*, (1) Greenish brown or black, (2) Roughened by slender wavy lines.
- e. Bracelet plantain, *Plantago aristata*, (1) Light or dark brown, (2) Dull.
- f. Dwarf plantain, *Plantago virginica*, (1) Light brown.
- g. Blue field madder, *Sherardia arvensis*, (1) Dull brown, (2) With small white hairs.
- h. Cleavers, *Galium aparine*, (1) Grey or brown, (2) With hair bearing tubercles.
- i. Wild corn salad, *Valerianella morrisonii*, (1) Brown, (2) Quite smooth.
- j. Wild corn salad, *Valerianella* sp., (1) Brown, (2) Somewhat hairy.
- k. Poverty weed, *Iva axillaris*, (1) Rusty Brown, (2) Somewhat roughened.
- l. Brown-eyed Susan, *Rudbeckia hirta*, (1) Black, (2) Having fine vertical ridges.
- m. Mayweed, *Anthemis cotula*, (1) Straw or brown, (2) Having warted ridges.
- n. Field camomile, *Anthemis arvensis*, (1) Whitish, light or dark brown, (2) Vertically grooved.
- o. Scentless camomile, *Matricaria inodora*, (1) Black, (2) Rough and ribbed.
- p. Cornflower, *Centaurea cyanus*, (1) Body of seed, bluish grey, (2) Smooth. Brush of bristles, light reddish yellow.
- q. Cat's-ear, *Hypochaeris radicata*, (1) Body of seed, reddish brown and (2) Rough.
- r. Oxtongue, *Picris echioides*, (1) Reddish yellow, (2) Darker transverse ridges.
- s. Hawkweed picris, *Picris hieracioides*, (1) Reddish brown, (2) Darker transverse ridges.
- t. Orange picris, *Hieracium aurantiacum*, (1) Black, (2) Ridged lengthwise; bearing tuft of white bristles.

—Bureau of Plant Industry, U. S. Dept. of Agric.

Reference and Directory Index—Pages 4 and 6

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CHARACTERISTICS OF FIELD SEEDS

VARIETY	Viability of Good Seed	Purity of Good Seed	Average Germination One Year Old	Average Length of Vitality Years	Weight of Seed Per Bu. Legal	Weight of Seed Per Bu. Actual	Quantity Required Per Acre	Yield of Seed Per Acre	Number of Seeds Per Pound Average
Alfalfa.....	97-99	98-99	94	6-8	60	60-63	15-20	300-700	220,000
Bluegrass, Kentucky.....	70-85	75-85	30-40	1-2	14	14-28	20-30	200-350	2,400,000
Bluegrass, Canada.....	85	75-85	30-40	1-2	14	14-24	15	200-500	2,400,000
Brome Grass.....	90-95	98-99	85-90	5	14	12-20	10-14	250-350	137,000
Clover, Alsike.....	99	99	75	2	60	60-66	8-12	100-300	700,000
Clover, Red.....	99	99	90	5-6	60	60-63	8-12	100-300	250,000
Clover, White.....	99	98	75	2	60	60-63	8-12	200-300	700,000
Clover, Crimson.....	99	99	90	2	60	60-63	12-20	200-300	125,000
Clover, Sweet.....	95-98	99	90-95	5	.....	.....	20-30	150-400	235,000
Cowpea.....	90	99	80	2	60	Variable	30-60	900-1800	1,800-5,100
Fescue, Meadow.....	95	90	93	2	.....	20-30	10-15	200-300	250,000
Millet, Foxtail (Common, Golden, Hungarian, Siberian).....	90	98	88	4	48-50	40-55	25-50	.....	200,000
Orchard Grass.....	98	97	90	2-3	14	12-22	12-20	140-168	400,000
Rape.....	95	99	90	6	.....	.....	2-4	600-1000	.....
Redtop.....	95	95-98	.....	6	14	12-40	10-20	.....	4,135,900
Rye Grass, Perennial.....	95	98	80	2	.....	10-30	25-35	250-500	336,000
Rye Grass, Italian.....	95	98	80	2	20	12-24	35-40	500	285,000
Soy Bean.....	98	99	90	2	60	60	20-30	1000-2400	2,144-6,388
Timothy.....	98	98	95	5-6	45	42-50	9-15	225-450	1,170,500
Vetch.....	95	99	90	3	60	60	40-90	600-720	8,500-16,000

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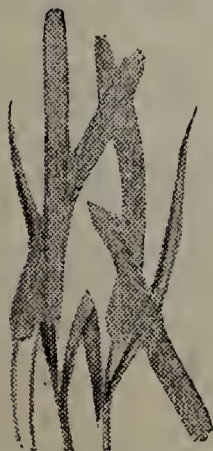
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99.50% **TIMOTHY SEED** 99.60%  
PURITY PURITY

**Carlots a Specialty**

**Sweet Clover • Red Clover • Alsike • Alfalfa**



# **ALSIKE CLOVER SEED PRICES AT TOLEDO**

High and Low Cash Prices per Bushel by Months

	Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1918	14.70	15.25	15.25	15.25	15.00	11.25	11.25	14.50	15.75	18.05	18.55	19.45
	16.60	18.00	15.90	15.50	15.25	14.50	14.50	15.50	18.50	18.50	20.00	19.75
1919	17.30	16.50	16.75	24.00	26.00	19.00	22.25	24.25	24.30	26.50	29.50	30.05
	19.65	17.50	25.50	26.00	26.00	22.25	26.25	25.75	26.50	29.75	31.25	33.00
1920	32.80	34.70	34.85	27.00	22.50	24.50	21.00	17.50	15.25	16.50	15.60	16.25
	36.25	36.20	36.50	36.25	30.00	26.75	25.00	21.50	18.00	18.50	18.00	17.75
1921	15.50	14.50	13.00	13.50	13.50	13.50	10.10	10.05	10.45	10.50	10.25	10.70
	17.50	15.50	15.00	14.15	13.50	13.50	12.25	11.35	10.75	10.75	10.90	11.40
1922	11.40	12.00	11.50	10.50	10.50	11.50	10.25	9.50	10.00	10.05	10.45	10.65
	12.00	12.65	12.50	11.50	11.50	11.75	11.75	10.25	10.25	11.00	11.50	11.00
1923	10.55	10.45	10.45	10.50	10.00	10.25	10.15	10.15	10.40	10.00	9.25	9.30
	10.95	10.60	10.50	10.50	10.50	10.25	10.25	11.15	10.75	10.50	10.00	9.45
1924	8.70	8.35	8.70	8.75	9.70	9.80	10.65	10.00	10.00	12.15	12.25	12.60
	9.50	8.80	9.20	9.50	10.20	10.80	10.80	10.80	12.25	12.75	13.30	13.25
1925	13.05	12.60	12.75	14.40*	....	....	....	....	....	....	....	15.60
	13.60	13.60	14.25	15.15	....	....	....	....	....	....	....	16.25
1926	16.00	16.50	17.00	17.00	17.00	15.00	14.50	14.50	16.50	18.00	18.25	19.75
	16.50	17.00	17.00	17.00	17.00	17.00	15.50	16.25	18.75	18.50	19.75	20.85
1927	21.00	22.50	22.75	23.75	24.00	....	....	14.60	14.80	14.80	15.40	16.00
	22.50	22.75	23.75	24.00	24.00	....	....	17.00	15.25	15.40	16.70	16.80
1928	16.20	15.95	15.00	15.00	15.00	15.00	16.25	16.25	18.75	18.75	18.60	19.00
	16.30	16.25	15.95	15.45	15.00	16.25	16.50	18.75	18.75	19.75	19.90	19.20
1929	19.00	19.00	19.25	20.00	20.00	....	11.00	10.10	10.40	10.50	10.40	10.50
	19.00	19.25	20.00	20.00	20.00	....	12.00	11.75	10.95	10.90	10.50	10.75
1930	10.60	10.40	10.40	11.00	11.00	11.00	11.20	11.80	12.50	13.65	13.65	13.75
	10.75	10.65	11.00	11.00	11.00	11.20	11.95	12.50	13.75	13.75	13.75	13.75
1931	13.75	13.90	14.00	14.00	14.00	14.00	8.65	8.10	7.50	7.50	8.00	8.50
	13.90	14.00	14.00	14.00	14.00	14.00	14.00	8.65	7.75	7.90	8.50	8.75
1932	8.50	8.75	8.75	8.75	8.75	†	†	†	5.50	5.50	....	....
	8.75	8.75	8.75	8.75	8.75	†	†	†	5.75	5.85	....	....

\*Cash prices not quoted after April 20, 1925.

†Did not quote prices during June, July and August, 1932.

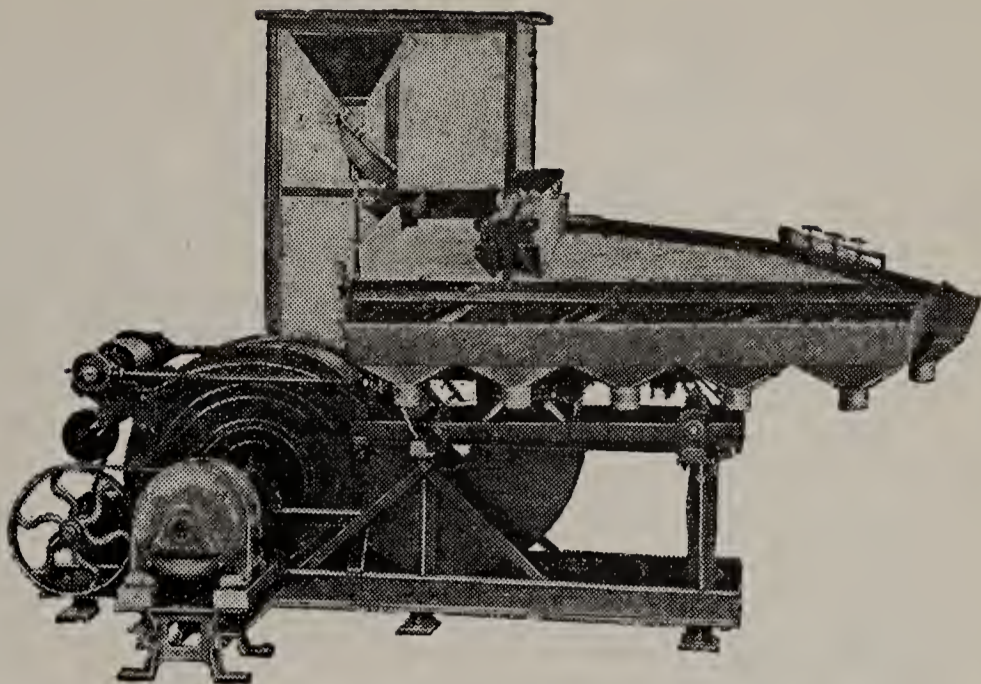
## **WHOLESALE CASH PRICES OF FIELD SEEDS, 1921-32**

(For best grades, per 100 pounds)

Compiled by Hay, Feed & Seed Division, Bureau of Agricultural Economics.  
U. S. Department of Agriculture

Year	Alfalfa, Kansas City	Red clover, Chicago	Alsike clover, Chicago	Sweet clover, Minne- apolis	Lespe- deza, Louis- ville	Hairy vetch, Balti- more	Timothy, Chicago	Red- top, Chicago	Kentucky blue- grass, Kansas City	German millet, Kansas City	Amber sorgo, Kansas City	Sudan grass, Kansas City
1921	18.30	19.70	22.30	9.80	21.80	9.70	6.60	13.05	29.00	1.80	1.40	3.00
1922	18.00	23.50	18.20	8.50	17.10	12.00	7.00	22.65	53.50	2.15	2.00	4.70
1923	20.00	20.90	16.50	12.40	19.00	16.80	7.00	18.70	25.90	3.95	4.25	15.10
1924	22.30	20.90	15.70	15.30	21.10	10.40	8.00	13.60	25.10	4.00	1.70	8.20
1925	22.70	34.00	23.40	12.30	19.50	8.90	6.80	14.40	28.00	5.00	2.20	5.70
1926	20.40	33.70	27.60	9.70	15.20	12.30	7.90	31.25	38.00	3.10	2.80	4.20
1927	19.90	42.50	37.30	13.60	8.20	15.20	6.00	25.30	20.50	3.30	3.30	7.00
1928	21.80	30.60	27.80	8.50	18.80	9.70	4.70	13.10	19.70	2.40	2.00	3.70
1929	26.00	33.70	34.70	8.50	20.60	9.30	6.60	14.60	31.30	3.40	2.10	5.60
1930	24.85	21.35	19.90	8.00	14.50	9.00	8.05	16.45	20.00	3.45	3.45	5.40
1931	22.55	25.05	23.90	9.20	14.70	8.45	10.55	24.20	34.35	3.70	2.80	7.40
1932	13.65	16.35	15.05	5.50	8.30	7.50	4.30	8.70	13.45	1.75	1.15	1.70

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for  
itself

## THE H. V. MODEL SPECIFIC GRAVITY SEPARATOR

Increases Profits by eliminating contamination and salvaging good material from your commodity. The HV Model Specific Gravity Separator is especially designed to remove contaminating elements from any dry commodity. Eliminating contamination naturally increases the value of any commodity, and adds extra profits. In the preparation of any commodity, such as seeds, there is a certain amount thrown away as waste. That waste contains good material which the HV model will salvage. The added profits from this salvaging alone often allows the HV model to pay for itself. How can you lose on an investment that pays for itself?

## PRICES AND TERMS

Upon receipt of information as to the commodity you desire to work on and the daily capacity required, we will be pleased to recommend the proper size and model of separator suitable for your work. We will also quote price and supply other desirable data. To well rated firms we are prepared to grant very easy terms, and where deferred payments are arranged we carry our own paper. Please make all requests on your business letter-head.

*The Grand Junction Seed Co.*  
MOUNTAIN ALFALFA SEED  
Grand Junction Colo.

March 17 1931.

Sutton, Steele & Steele Inc.  
Dallas Texas.

Gentlemen:

The Grand Junction Seed Co. has been in business for many years and is well known for its high quality alfalfa seed. We have been very successful in our business and are now looking for new markets for our seed. We have heard of your company and are very interested in your work. We would like to know more about your company and your work. We would like to know what you can do for us. We would like to know what you can do for us. We would like to know what you can do for us.

We were somewhat dubious when we read through many of the testimonials that your Mr. Steele gave us at the time we purchased one of your gravity machines. However after we got the machine up and in operation we could easily understand the enthusiasm shown in many of the letters. You can add us to your list of satisfied users who would not sell our machine for double the price we paid for it if we could not secure another one.

We had problems here in handling our sweet corn and lettuce and carrot seed which it seemed almost impossible for us to solve until we secured your machine.

We feel that we can recommend your machine highly to anyone in the seed business, for they can certainly find many uses for it in handling seeds of almost any nature.

Yours truly,  
THE GRAND JUNCTION SEED COMPANY

*[Signature]*  
President

ABD:G

# ● Sutton, Steele and Steele, Inc.

## DALLAS

## TEXAS

**FREE!** We will gladly make a test separation on any variety of seed you are interested in. We only ask that your sample weigh 100 lbs., and that you pay the transportation costs.

## RED CLOVER SEED PRICES AT TOLEDO

Low and High Cash Prices per Bushel for Prime Seed by Months

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec
1921..	11.70 13.75	10.30 11.95	11.00 13.25	11.90 13.25	13.25 13.75	13.00 13.75	13.00 14.00	11.65 14.05	11.40 12.95	12.30 13.05	11.60 12.70	12.55 14.00
1922..	13.60 14.05	14.00 16.00	14.50 16.15	13.00 14.60	13.75 13.90	13.00 13.00	13.00 13.00	9.50 11.00	10.00 11.50	11.05 12.70	12.75 13.30	13.10 13.85
1923..	13.25 13.50	12.95 13.65	11.95 13.15	11.45 12.00	11.00 11.45	10.05 10.85	10.00 10.70	11.05 12.65	12.25 14.60	14.15 15.20	12.95 14.25	12.95 13.40
1924..	12.60 13.90	11.35 12.85	11.30 12.35	10.75 11.50	10.80 11.40	11.00 11.65	11.35 12.40	11.80 13.30	12.75 17.60	16.50 18.20	17.65 19.90	19.05 19.80
1925..	19.15 19.85	18.10 20.00	16.50 18.75	16.40 17.20	15.00 16.30	16.25 17.55	16.00 17.25	16.25 17.45	14.80 16.75	16.75 18.25	14.30 15.50 *18.50 *18.75	14.75 17.05 *18.20 *18.5
1926	{ 14.85 16.00 *18.75 *20.00	{ 14.85 15.70 *20.00 *21.00	{ 14.25 15.40 *21.00 *21.00	{ 14.35 14.40 *21.00 *21.00	{ 14.35 17.50 *21.00 *21.00	{ 17.50 17.70 *21.50 *22.00	{ 17.50 17.75 *22.00 *22.00	{ 17.75 19.50 † †	{ 19.25 21.75 *21.00 *21.75	{ 19.00 20.00 *21.00 *22.75	{ 20.00 20.00 21.60 22.50	{ 20.00 20.50 22.25 22.85
1927	{ 20.50 21.50 *23.00 *23.50	{ 21.50 23.00 *23.50 *24.75	{ 16.75 17.65 *24.75 *27.00	{ 16.75 17.40 *26.50 *27.00	{ 13.75 16.85 *26.50 *26.50	{ 13.00 13.90 ** **	{ 13.90 14.25 ..... .....	{ 13.75 14.00 ..... .....	{ 13.75 14.50 ..... .....	{ 14.00 15.50 *15.60 *17.90	{ 15.50 16.40 *17.60 *18.40	{ 16.30 16.40 *17.55 *18.70
1928	{ 15.75 16.30 *18.05 *18.85	{ 14.75 15.75 *16.50 *18.05	{ 14.50 14.75 *16.65 *17.75	{ 13.75 14.50 *16.75 *17.25	{ 12.60 13.75 *16.50 *16.60	{ 13.00 14.25 *16.60 *17.75	{ 14.25 14.25 *17.75 *18.00	{ 14.00 14.25 *17.00 *17.50	{ 14.00 14.25 *17.50 *18.20	{ 13.75 14.25 *18.00 *18.65	{ 12.65 13.75 *17.45 *18.50	{ 12.65 12.7 *18.0 *18.20
1929	{ 12.75 12.75 *18.00 *18.25	{ 12.75 12.75 17.50 *18.00	{ 12.75 12.75 *17.50 *17.50	{ 12.75 12.75 *17.25 17.50	{ 12.75 12.75 *17.00 *16.00	{ 12.75 12.75 *16.00 *16.00	{ 12.75 12.75 *16.00 *16.00	{ 12.00 12.75 *12.60 *16.00	{ 11.00 12.00 *11.65 *12.50	{ 11.00 11.00 *11.85 *11.10	{ 10.25 11.00 *10.65 *11.10	{ 10.25 10.25 *11.00 *11.25
1930	{ 9.50 10.25 *10.90 *11.30	{ 9.00 9.50 *10.80 *11.00	{ 9.00 9.00 *10.40 *11.50	{ 9.00 9.00 *11.40 *11.75	Stopped Trading in Imported Seeds							
	{ 11.75 11.75 11.75 11.75	{ 11.75 11.75 12.50 12.50	{ 11.75 11.75 13.50 13.50	{ 11.75 11.75 14.75 14.75	{ 11.75 11.75 15.50 15.50	{ 11.75 11.75 15.50 15.50	{ 11.75 11.75 15.50 15.50	{ 11.75 11.75 15.50 15.50	{ 11.75 11.75 15.50 15.50	{ 11.75 11.75 15.50 15.50	{ 11.75 11.75 15.50 15.50	{ 11.75 11.75 15.50 15.50
1931..	15.35 15.35	14.75 15.00	14.00 15.00	14.00 14.00	14.00 14.00	13.75 14.00	13.50 13.75	9.00 13.50	7.50 8.50	7.50 8.10	8.25 9.00	8.50 9.00
1932..	8.60 8.75	8.75 8.75	8.75 8.75	8.75 9.00	9.00 9.00	† †	† †	† †	5.50 5.65	5.50 5.65	..... .....	..... .....

\*Domestic red clover seed. Other quotations in November and December of 1925 and all of 1926, 1927 1928, 1929 and 1930 are on imported seed.

†Stopped quoting cash domestic from July 22 to September 24, 1926.

\*\*Stopped quoting cash domestic May 14, 1927.

‡Did not quote prices during June, July and August, 1932.

*When you need*  
**GRASS SEEDS — FIELD SEEDS**  
**IMPORTED PIGEON GRAINS**  
*and*  
**BIRD SEEDS**

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Front and Arch Streets

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Philadelphia, Pa.

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Northrup, King & Co.

Minneapolis, Minn. Estb. 1884

FORAGE PLANT SEEDS PERMITTED ENTRY UNDER  
FEDERAL SEED ACT

By Fiscal Years Ending June 30, 1926-1932, and by Countries Exporting

(Reported by the U. S. Division of Seed Investigations, Washington, D. C.)

ALFALFA

COUNTRY	1926 Pounds	1927 Pounds	1928 Pounds	1929 Pounds	1930 Pounds	1931 Pounds	1932 Pounds
Argentina.....	221,700	(1)73,700	.....	317,900	302,100	44,500	.....
Canada.....	4,218,800	5,058,400	728,300	154,000	2,300	177,900	352,700
France.....	.....	(1)1,600	.....	.....	32,600	11,000	.....
Germany.....	.....	.....	.....	(2)198,500	.....	.....	.....
Latvia.....	(3)107,300	.....	(3)53,900	.....	.....	.....	.....
Other countries....	500	.....	100	(4)476,000	.....	.....	.....

ALSIKE CLOVER

	1926 Pounds	1927 Pounds	1928 Pounds	1929 Pounds	1930 Pounds	1931 Pounds	1932 Pounds
Canada.....	10,885,500	4,138,800	7,608,600	4,787,000	7,220,300	93,800	.....
England.....	12,200	.....	.....	.....	.....	.....	.....
Germany.....	42,300	.....	.....	10,900	.....	.....	.....
Poland.....	49,400	.....	.....	.....	.....	.....	.....
Other countries....	.....	24,400	.....	.....	.....	.....	.....

WINTER RAPE SEED

	1926 Pounds	1927 Pounds	1928 Pounds	1929 Pounds	1930 Pounds	1931 Pounds	1932 Pounds
China.....	.....	.....	30,100	.....	.....	.....	.....
England.....	43,400	9,200	3,700	6,900	6,300	6,700	2,100
France.....	636,000	3,200	.....	460,000	175,900	.....	21,800
Germany.....	735,300	149,400	83,700	216,600	138,300	(5)489,000	214,700
Holland.....	3,043,000	3,582,700	4,616,700	4,621,300	1,709,700	2,478,800	2,410,100
Hungary.....	266,800	.....	.....	223,100	79,700	69,600	59,600
Japan.....	1,406,500	2,998,100	1,703,300	1,454,400	4,397,800	2,042,000	961,300
Poland.....	395,300	.....	.....	.....	162,200	32,800	92,200
Other countries....	.....	44,900	300	.....	10,900	.....	100

HAIRY VETCH

	1926 Pounds	1927 Pounds	1928 Pounds	1929 Pounds	1930 Pounds	1931 Pounds	1932 Pounds
Canada.....	70,700	48,400	6,100	19,200	.....	6,500	14,300
Czechoslovakia....	568,600	32,900	42,900	240,100	507,600	64,500	228,500
Denmark.....	65,000	21,800	52,300	.....	.....	.....	78,200
England.....	35,200	.....	.....	800	.....	.....	.....
Germany.....	1,982,200	927,900	1,351,200	(6)1,801,200	(7)713,400	(8)543,100	(9)548,500
Holland.....	7,000	1,200	.....	.....	.....	.....	.....
Hungary.....	218,100	116,600	945,700	1,226,100	1,074,300	540,000	1,043,900
Latvia.....	959,600	787,900	1,256,900	474,700	165,000	427,000	248,900
Poland.....	3,500	79,600	86,000	142,800	.....	.....	167,700
Sweden.....	76,300	107,600	43,900	159,000	22,800	47,100	2,600
Other countries....	.....	.....	(10)110,200	.....	.....	.....	(10)32,800

ENGLISH RYEGRASS

	1926 Pounds	1927 Pounds	1928 Pounds	1929 Pounds	1930 Pounds	1931 Pounds	1932 Pounds
Denmark.....	2,200	.....	20,000	21,500	6,000	500	2,300
England.....	9,100	57,800	8,800	10,600	13,100	12,400	17,900
Ireland.....	1,823,700	578,500	624,000	886,900	696,200	523,500	373,200
New Zealand.....	210,700	378,600	340,200	138,000	11,600	3,200	47,900
Scotland.....	255,900	187,900	88,800	116,700	189,700	(11)283,000	(12)201,300
Other countries....	.....	.....	1,000	6,200	20,500	900	(13)2,900

CRIMSON CLOVER

	1926 Pounds	1927 Pounds	1928 Pounds	1929 Pounds	1930 Pounds	1931 Pounds	1932 Pounds
Czechoslovakia....	.....	.....	21,500	132,400	162,500	.....	.....
England.....	82,800	187,500	19,500	.....	.....	(14)85,700	20,100
France.....	4,955,900	1,438,800	725,600	2,632,700	581,500	1,242,200	54,600
Germany.....	76,000	11,000	107,600	157,100	(15)681,800	(16)231,800	(17)285,900
Hungary.....	629,200	740,200	471,900	472,500	1,673,000	1,519,200	1,470,600
Italy.....	21,600	.....	.....	.....	.....	.....	.....
Poland.....	.....	7,500	.....	.....	.....	.....	.....

(1) American goods returned. (2) 197,500 lbs. of Turkestan origin; 1,000 lbs. American goods returned. (3) Of Turkestan origin. (4) 465,200 lbs. of Turkestan origin. (5) 11,000 lbs. of Hungarian origin. (6) 126,500 lbs. of Latvian origin. (7) 271,500 lbs. of Czechoslovakian origin; 187,300 lbs. of Latvian origin; 87,600 lbs. of Hungarian origin. (8) 356,800 lbs. of Hungarian origin; 46,800 lbs. of Czechoslovakian origin. (9) 60,500 lbs. of Hungarian origin; 43,800 lbs. of Latvian origin. (10) From Lithuania. (11) 51,600 lbs. of Irish origin. (12) 150,700 lbs. of Irish origin. (13) 2,200 lbs. of Australian origin; 700 lbs. from Holland. (14) 9,600 lbs. of French origin. (15) 589,900 lbs. of Hungarian origin; 36,100 lbs. of Czechoslovakian origin. (16) Of Hungarian origin. (17) 187,900 lbs. of Hungarian origin.

(Table Continued on Opposite Page)

# FORAGE PLANT SEEDS PERMITTED ENTRY UNDER FEDERAL SEED ACT

(Continued from preceding page)

## ORCHARD GRASS

COUNTRY	1926 Pounds	1927 Pounds	1928 Pounds	1929 Pounds	1930 Pounds	1931 Pounds	1932 Pounds
Denmark.....	249,700	260,300	169,500	1,964,000	123,400	339,700	.....
Germany.....	.....	.....	3,000	376,100	191,700	2,200	1,100
Holland.....	3,300	.....	.....	36,900	300	.....	.....
Other countries....	.....	.....	.....	100	3,000	100	.....

## RED CLOVER

	1926 Pounds	1927 Pounds	1928 Pounds	1929 Pounds	1930 Pounds	1931 Pounds	1932 Pounds
Canada.....	288,000	63,100	3,300	183,700	300	.....	.....
Chile.....	85,200	.....	.....	.....	.....	.....	.....
Czechoslovakia....	.....	.....	(1)43,600	185,700	53,800	44,100	(3)30,800
England.....	100	109,200	.....	(2)867,700	89,600	11,200	.....
France.....	18,889,600	10,406,500	462,300	3,623,000	471,800	2,630,800	.....
Germany.....	389,900	.....	(4)656,700	(5)465,200	(6)358,000	.....	.....
Holland.....	11,000	.....	200,000	109,300	44,100	.....	.....
Italy.....	33,000	.....	.....	.....	.....	.....	.....
Poland.....	.....	.....	1,872,300	1,524,300	953,000	119,100	.....
Other countries....	28,400	(7)237,300	(8)1,402,600	(9)588,100	(8)183,700	100	(3)100

## CANADA BLUEGRASS

	1926 Pounds	1927 Pounds	1928 Pounds	1929 Pounds	1930 Pounds	1931 Pounds	1932 Pounds
Canada.....	283,700	881,700	1,101,900	1,227,800	608,000	985,100	366,200

## SPRING VETCH

	1926 Pounds	1927 Pounds	1928 Pounds	1929 Pounds	1930 Pounds	1931 Pounds	1932 Pounds
Canada.....	118,000	13,200	.....	600	.....	.....	500
England.....	44,800	22,400	700	.....	.....	.....	.....
Germany.....	479,400	308,100	187,100	.....	358,100	286,700	.....
Holland.....	405,400	109,400	63,000	.....	11,000	55,100	.....
Latvia.....	549,700	356,900	19,800	.....	110,200	33,000	.....
Poland.....	.....	142,000	220,300	.....	43,700	.....	.....
Scotland.....	5,500	6,600	16,800	.....	.....	.....	.....
Other countries....	.....	33,500	54,800	100	(10)297,900	329,500	(11)201,600

## ITALIAN RYEGRASS

	1926 Pounds	1927 Pounds	1928 Pounds	1929 Pounds	1930 Pounds	1931 Pounds	1932 Pounds
Argentina.....	43,100	.....	.....	.....	44,800	.....	.....
Denmark.....	176,700	230,900	72,000	42,500	73,100	39,800	18,200
England.....	37,000	1,300	.....	.....	.....	.....	4,400
France.....	374,600	76,100	21,800	.....	.....	.....	.....
Holland.....	2,900	500	1,900	600	3,900	2,300	500
Ireland.....	972,800	372,400	167,400	102,800	94,600	90,100	45,400
New Zealand.....	2,300	34,400	187,200	115,300	13,600	.....	600
Scotland.....	73,800	117,600	5,400	37,400	9,000	(12)67,600	6,000
Other countries....	.....	.....	200	(13)1,400	(14)4,900	600	.....

## WHITE CLOVER

	1926 Pounds	1927 Pounds	1928 Pounds	1929 Pounds	1930 Pounds	1931 Pounds	1932 Pounds
Czechoslovakia....	88,000	15,300	24,400	30,800	30,900	.....	(15)30,600
Denmark.....	5,500	11,700	.....	26,400	.....	.....	.....
England.....	114,300	83,900	65,400	115,500	25,200	31,500	(16)23,900
France.....	7,700	.....	.....	400	.....	.....	.....
Germany.....	743,100	448,700	629,400	(17)1,310,200	(18)1,261,900	378,600	494,200
Holland.....	44,400	.....	.....	1,600	18,400	.....	.....
New Zealand.....	.....	6,800	15,400	.....	200	6,800	6,500
Poland.....	663,300	406,900	977,000	924,200	941,600	350,500	335,100
Other countries....	100	1,400	66,400	800	.....	300	2,200

## ALL OTHER FORAGE CROP SEEDS

	1926 Pounds	1927 Pounds	1928 Pounds	1929 Pounds	1930 Pounds	1931 Pounds	1932 Pounds
Canada.....	264,200	77,000	94,600	368,900	8,500	4,300	200
Denmark.....	2,200	7,600	100	700	2,000	.....	200
Germany.....	15,800	.....	.....	2,500	(19)15,100	1,400	16,300
Other countries....	11,200	99,100	200	2,500	52,400	14,900	2,900

(1) 10,900 lbs. of Polish origin. (2) 43,900 lbs. of European Russian origin; 17,100 lbs. American goods returned. (3) American goods returned. (4) Of Polish, Hungarian and Roumanian origin. (5) 222,000 lbs. of European Russian origin; 226,600 lbs. of Polish origin; 14,400 lbs. of Roumanian origin; 2,200 lbs. of French origin. (6) 300,800 lbs. of Polish origin. (7) 211,700 lbs. of European Russian origin. (8) Of European Russian origin. (9) 65,100 lbs. from Hungary; 34,100 lbs. American goods; 488,900 lbs. of European Russian origin. (10) 250,400 lbs. from Estonia (of Russian origin); 43,000 lbs. from Hungary; 4,400 lbs. from Sweden; 100 lbs. from Australia. (11) 146,500 lbs. from Belgium; 55,000 lbs. from European Russia; 100 lbs. from Ireland. (12) 4,400 lbs. of Irish origin. (13) 1,000 lbs. of Dutch origin. (14) 4,500 lbs. from Germany (of Irish origin); 400 lbs. of Australian origin. (15) 15,400 lbs. of Polish origin. (16) 13,300 lbs. of Polish origin. (17) 111,700 lbs. of Polish origin; 12,000 lbs. of Czechoslovakian origin. (18) 26,100 lbs. of Polish origin; 11,000 lbs. of Czechoslovakian origin. (19) Of Polish origin.

RANGE OF MARCH CLOVER SEED PRICES AT TOLEDO

Low and High Prices per Bushel by Months

Crop of	Aug.	Sept.	Oct.	Nov.	Dec.		Jan.	Feb.	Mar
1920.....	18.25	14.65	13.17	11.60	12.10	1921	{11.90	10.05	11.05
	21.25	18.60	15.90	14.40	13.35		{13.90	12.10	12.95
1921.....	11.70	11.40	12.30	11.75	12.55	1922	{13.20	14.00	14.50
	13.95	13.30	12.95	12.75	13.35		{14.25	15.95	16.15
1922.....	9.05	9.85	11.35	12.85	13.35	1923	{13.35	12.70	12.75
	10.30	11.70	12.80	13.50	13.90		{13.65	13.50	13.05
1923.....	11.90	13.15	13.85	13.05	13.05	1924	{12.80	11.35	11.50
	13.40	15.20	14.60	13.90	13.60		{14.05	13.05	12.35
1924.....	13.00	13.20	17.00	17.95	19.15	1925	{19.35	18.00	16.50
	13.65	18.50	18.50	19.95	20.00		{20.10	19.85	18.45
1925.....	14.45	14.45	15.05	14.75	14.65	1926	{14.65	14.85	14.25
	15.35	16.05	16.00	15.50	15.20		{16.10	15.75	15.40
1926.....	17.25	16.90	15.95	16.85	17.45	1927	{17.70	16.60	16.65
	17.75	19.20	17.25	17.70	18.00		{18.50	17.85	17.65
1927.....		15.85	15.95	17.60	17.80	1928	{18.00	16.40	16.65
		16.80	17.75	18.50	18.70		{19.00	18.00	17.75
1928.....				17.95	18.35	1929	{18.20	17.55	17.50
				19.00	18.75		{18.60	18.10	17.50
1929.....			11.60	11.15	11.50	1930	{11.15	10.80	10.45
			12.25	11.60	11.75		{11.50	11.15	11.70
1930.....	15.75	15.75	15.75	15.55	15.40	1931	{15.15	14.75	14.00
	16.25	16.25	16.25	15.75	15.50		{15.40	15.15	14.75
1931.....			8.50	8.75	8.90	1932	{8.90	8.75	8.75
			8.75	9.50	9.00		{9.00	8.90	8.75

FIELD SEED PRODUCTION IN UNITED STATES  
FOR PAST FIVE YEARS

Compiled by Hay, Feed & Seed Division, Bureau of Agricultural Economics.  
U. S. Department of Agriculture

Kind	Lbs. or Bus.	1928	1929	1930	1931	***1932
Alfalfa*	Lbs.	50,000,000	58,900,000	70,000,000	50,300,000	32,300,000
Clover, alsike*	Lbs.	20,000,000	43,000,000	26,400,000	21,300,000	26,300,000
Clover, red*	Lbs.	50,000,000	115,000,000	63,000,000	47,000,000	75,000,000
Clover, sweet*	Lbs.	57,000,000	70,000,000	50,900,000	50,300,000	34,400,000
Clover, white	Lbs.	1,200,000	1,500,000	1,200,000	1,000,000	750,000
Clover, crimson	Lbs.	350,000	450,000	500,000	550,000	500,000
Bluegrass, Ky.	Bus.	300,000	1,350,000	775,000	3,500,000	1,100,000
Meadow Fescue**	Lbs.	1,300,000	1,400,000	700,000	800,000	320,000
Orchard Grass	Bus.	235,000	250,000	205,000	425,000	110,000
Redtop**	Lbs.	14,300,000	8,000,000	7,500,000	18,000,000	16,000,000
Sudan Grass	Lbs.	34,000,000	30,000,000	23,000,000	50,000,000	10,000,000
Timothy*	Lbs.	55,000,000	62,000,000	78,300,000	92,100,000	80,100,000

\*Figures for these seeds subject to revision.  
\*\*Recleaned.  
\*\*\*Preliminary.

Use the Sticker When Buying from Our Advertisers!  
(See page facing Back Cover)

# Occidental Seed Company

Salt Lake City, Utah

Idaho and Utah U. S. Verified Origin  
Common Alfalfa and Medium Clover.  
Idaho and Utah State Sealed and Tagged  
Grimm Alfalfa also Sweet, Alsike and Grasses.

## Lespedeza Sericea

Wonder plant that thrives on poor, sour soil—the plant for the poor man on poor land. Extremely drought resistant, produces large yields of seed and forage—a great soil improver.

Write for booklet on growing this new perennial, legume which bids fair to revolutionize agriculture.

Certified, Hulled and Scarified High Germinating Seed of all Strains for Sale at Farmers' Prices

ALSO KOREAN LESPEDEZA

Woodleaf Certified Seed Assn., Inc., Mutual  
W. V. Fielder, Manager  
Woodleaf, North Carolina

## *We Buy and Sell*

Red, White and Alsike  
Clover, White and Yellow Blossom Sweet Clover, Alfalfa, Blue Grass, Red Top, Millet, Cane, Kaffir and all seed grains



*Correspondence Solicited*



**Ouren Seed Company**

Council Bluffs, Iowa

## MORE THAN FOUR MILLION BUYERS

of seeds, plants, bulbs, nursery stock, pets and pet supplies, poultry supplies and various accessories, are patrons of SEED WORLD readers.

PRICES OCTOBER CLOVER SEED AT TOLEDO

Low and High Prices per Bushel by Months

Crop of	March	April	May	June	July	Aug.	Sept.	Oct.
1917.....	9.55	9.85	11.35	11.40	11.50	12.50	13.35	13.85
	9.90	11.80	11.92	11.75	13.00	13.95	13.95	15.55
1918.....	19.70	18.00	18.00	12.80	13.10	16.30	19.05	22.55
	20.85	20.20	18.40	14.20	16.35	19.50	23.80	24.00
1919.....	17.00	17.15	19.75	21.50	26.20	29.50	28.15	30.00
	19.30	19.75	22.00	25.50	32.50	32.35	30.60	31.80
1920.....	23.00	22.00	23.40	23.50	20.15	18.20	14.60	12.90
	25.25	24.25	24.25	26.25	25.95	21.75	18.55	15.60
1921.....	9.00	8.85	9.50	10.35	11.35	11.65	11.40	12.30
	9.95	9.40	10.50	12.25	14.00	14.05	12.95	13.65
1922.....	11.00	11.10	11.05	10.80	10.67	8.97	9.70	11.05
	12.35	12.00	11.60	11.35	11.40	10.27	11.50	12.70
1923.....	11.20	11.45	11.70	11.00	10.90	11.85	13.10	14.30
	11.72	11.95	12.30	11.97	11.55	13.35	15.65	15.60
1924.....	11.92	11.75	11.85	12.00	12.35	12.50	13.90	17.30
	12.65	12.40	12.40	12.65	13.60	14.30	19.00	19.00
1925.....	13.00	13.00	13.05	14.50	14.55	14.75	14.75	16.75
	14.00	14.50	14.25	16.10	16.00	16.00	17.25	18.25
1926.....	15.65	15.65	16.50	19.25	19.65	19.95	20.75	21.00
	16.50	16.70	19.50	20.75	21.25	22.10	22.50	22.75
1927.....	16.50	16.45	16.00	16.50	16.60	17.00	15.00	15.70
	17.50	17.00	16.85	16.95	17.50	18.00	17.25	17.90
1928.....	15.00	16.25	17.30	17.75	18.65	17.30	18.00	18.30
	16.15	17.75	17.75	18.75	19.10	18.65	18.60	18.65
1929.....	.....	.....	.....	.....	.....	12.95	11.75	11.10
	.....	.....	.....	.....	.....	14.75	12.75	11.85
1930.....	11.35	12.00	12.60	12.60	13.60	14.35	14.75	15.00
	12.20	12.60	12.60	13.25	14.35	15.75	15.50	15.50
1931.....	12.25	14.25	14.25	13.75	13.50	9.00	7.50	7.50
	14.00	14.25	14.25	14.25	13.75	13.75	8.50	8.10
1932.....	.....	.....	.....	.....	.....	.....	5.50	5.60
	.....	.....	.....	.....	.....	.....	5.65	5.65

“CANADA’S GREATEST SEED HOUSE”

ALSIKE

SWEET CLOVER                      CANADIAN BLUE GRASS  
ALFALFA, CANADIAN VARIEGATED, RED CLOVER

SAMPLES ON REQUEST—CARLOTS

STEELE, BRIGGS SEED CO.

TORONTO                      Limited                      CANADA

*We Specialize*  
in

HIGH QUALITY  
OHIO GROWN

Red Clover, Alsike  
and Timothy Seeds



*The*  
**ACKERMAN CO.**  
LIMA, OHIO

**THE CHAS. C. HART  
SEED COMPANY**

**GARDEN SEED  
FLOWER SEED  
SWEET CORN  
BEANS  
PEAS**

CHOICE STOCKS

WRITE OR WIRE FOR QUOTATIONS  
ON YOUR SEED REQUIREMENTS  
FOR EITHER PROMPT OR FUTURE  
DELIVERY. WE KNOW WE CAN  
PLEASE YOU IN BOTH QUALITY  
AND PRICE.

**THE CHAS. C. HART  
SEED COMPANY**  
WETHERSFIELD, CONN.

**ASSARIA  
HARDWARE  
CO.**

Alfalfa & Sweet Clover  
Sudan and Cane



Carlots or Less



ASSARIA, KANSAS

**CERTIFIED  
BENT  
SEEDS**

PRINCE EDWARD ISLAND

CANADIAN VELVET

COOS COUNTY SEASIDE

and a

complete  
line of

CLOVERS

GRASS SEEDS

ALL FARM SEEDS



*car lots or less*

THE  
**J. M. McCULLOUGH'S SONS CO.**  
Cincinnati, P. O. Box 845 Ohio  
*We Specialize in Fancy Grasses*

# New Tariff Rates Now in Effect

Approved by U. S. Congress, June 17, 1930

*The following paragraphs from the Tariff Act of 1930 pertain to  
Seeds, Bulbs and Nursery Stock*

**Par. 722. Barley**, hulled or unhulled, 20 cents per bushel of forty-eight pounds; barley malt, 40 cents per one hundred pounds; pearl barley, patent barley and barley flour, 2 cents per pound.

**Par. 723. Buckwheat**, hulled or unhulled, 25 cents per one hundred pounds; buckwheat flour and grits or groats, one-half of one cent per pound.

**Par. 724. Corn** or maize, including cracked corn, 25 cents per bushel of fifty-six pounds; corn grits, meal, and flour, and similar products, 50 cents per one hundred pounds.

**Par. 726. Oats**, hulled or unhulled, 16 cents per bushel of thirty-two pounds; unhulled ground oats, 45 cents per one hundred pounds; oatmeal, rolled oats, oat grits, and similar oat products, 80 cents per one hundred pounds.

**Par. 727. Paddy or rough rice**, 1½ cents per pound; brown rice (hulls removed, all or in part), 1½ cents per pound; milled rice (bran removed, all or in part), 2½ cents per pound; broken rice, which will pass readily through a metal sieve perforated with round holes five and one-half sixty-fourths of one inch in diameter, and rice meal, flour, polish, and bran, five-eighths of 1 cent per pound.

**Par. 728. Rye**, 15 cents per bushel of fifty-six pounds; rye malt, 40 cents per one hundred pounds; rye flour and meal, 45 cents per one hundred pounds.

**Par. 729. Wheat**, 42 cents per bushel of sixty pounds; wheat, unfit for human consumption, 10 per centum ad valorem; wheat flour, semolina, crushed or cracked wheat, and similar wheat products not specially provided for, \$1.04 per one hundred pounds.

## Bulbs

**Par. 753. Tulip bulbs**, \$6 per thousand; hyacinth bulbs, \$4 per thousand; lily bulbs, \$6 per thousand; narcissus bulbs, \$6 per thousand; crocus corms, \$2 per thousand; lily of the valley pips, \$6 per thousand; all other bulbs, roots, rootstocks, clumps, corms, tubers and herbaceous perennials, imported for horticultural purposes, 30 per centum ad valorem.

## Nursery Stock

**Par. 754. Seedlings** and cuttings of Manetti, multiflora, brier, rugosa, and other rose stock, all the foregoing not more than three years old, \$2 per thousand; rose plants, budded, grafted, or grown on their own roots, 4 cents each; cuttings, seedlings, and grafted or budded plants of other deciduous or evergreen ornamental trees, shrubs, or vines, and all nursery or greenhouse stock, not specially provided for, 25 per centum ad valorem.

**Par. 755. Seedlings**, layers, and cuttings of apple, cherry, pear, plum, quince, and other fruit stocks, \$2 per thousand; grafted or budded fruit trees, cuttings and seedlings of grapes, currants, gooseberries, or other fruit vines, plants or bushes, 25 per centum ad valorem.

**Par. 762. Oil-bearing seeds** and materials: Castor beans, one-half of 1 cent per pound; flaxseed, 65 cents per bushel of fifty-six pounds; poppy seed, 32 cents per one hundred pounds; sunflower seed, 2 cents per pound; apricot

and peach kernels, 3 cents per pound; soy beans, 2 cents per pound; cottonseed, one-third of 1 cent per pound.

## Farm Seeds

**Par. 763. Grass seeds** and other forage crop seeds: Alfalfa, 8 cents per pound; alsike clover, 8 cents per pound; crimson clover, 2 cents per pound; red clover, 8 cents per pound; white and ladino clover, 6 cents per pound; sweet clover, 4 cents per pound; clover, not specially provided for, 3 cents per pound; millet, 1 cent per pound; orchard grass, 5 cents per pound; rye grass, 3 cents per pound; timothy, 2 cents per pound; hairy vetch, 3 cents per pound; other vetch, 1½ cents per pound; bent-grass (genus agrostis), 40 cents per pound; bluegrass, 5 cents per pound; tall oat, 5 cents per pound; all other grass and forage crop seeds not specially provided for, 2 cents per pound: "Provided"—That no allowance shall be made for dirt or other impurities in seed of any kind.

## Garden Seeds

**Par. 764. Other garden and field seeds**: Beet (except sugar beet), 4 cents per pound; cabbage, 12 cents per pound; canary, 1 cent per pound; carrot, 4 cents per pound; cauliflower, 25 cents per pound; celery, 2 cents per pound; kale, 6 cents per pound; kohlrabi, 8 cents per pound; mangelwurz, 4 cents per pound; mushroom spawn, 1 cent per pound; onion, 15 cents per pound; parsley, 2 cents per pound; parsnip, 4 cents per pound; pepper, 15 cents per pound; radish, 6 cents per pound; spinach, 1 cent per pound; tree and shrub, 8 cents per pound; turnip, 5 cents per pound; rutabaga, 5 cents per pound; flower, 6 cents per pound; all other garden and field seeds not specially provided for, 6 cents per pound: "Provided"—That the provisions for seeds in this schedule shall include such seeds whether used for planting or for other purposes.

## Beans and Peas

**Par. 765. Beans**, not specially provided for, and black-eye cow-peas: Green or unripe, 3½ cents per pound; dried, 3 cents per pound; in brine, 3 cents per pound; prepared or preserved in any manner, 3 cents per pound on the entire contents of the container.

**Par. 767. Lentils**, one-half of 1 cent per pound; lupines, one-half of 1 cent per pound.

**Par. 769. Peas** and chickpeas or garbanzos: Green or unripe, 3 cents per pound in the case of peas, and, in the case of chickpeas or garbanzos, 2 cents per pound; dried, 1¾ cents per pound; split, 2½ cents per pound; prepared or preserved in any manner, 2 cents per pound on the entire contents of the container.

**Par. 1727. Oil-bearing seeds** and nuts: Copra, hempseed, kapok seed, palm nuts, palm-nut kernels, tung nuts, rapeseed, rubber seed, perilla and sesame seed; seeds and nuts, not specially provided for, when the oils derived therefrom are free of duty. (See following note.)

Note: In the opinion of the American Seed Trade Association counsel, Curtis Nye Smith, Esq., seedsmen should declare hempseed and all varieties of rapeseed under this Par. 1727, free of duty, and not under Pars. 763 or 764.

## MONTHLY CASH PRICES OF TIMOTHY SEED

The following table exhibits the monthly range of prices, per 100 lbs., for cash Timothy Seed in the Chicago market during the past 21 years:

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1912.....	16.00 16.25	15.00 16.25	15.25 16.00	13.50 15.00	11.50 14.50	11.50 12.00	6.50 12.00	5.00 6.25	4.00 5.10	4.10 4.50	3.80 4.15	4.00 4.15
1913.....	4.00 4.20	3.50 4.05	3.60 3.85	3.80 3.95	3.95 4.25	4.10 5.40	5.15 5.30	5.25 5.90	5.30 5.70	5.25 5.55	5.30 5.50	5.40 5.55
1914.....	5.40 5.55	5.30 5.50	5.00 5.50	5.00 5.40	5.00 5.50	5.00 5.75	5.50 6.75	5.80 6.50	5.50 6.50	5.40 5.60	5.30 5.90	5.90 7.85
1915.....	7.75 8.00	7.30 7.75	6.65 7.40	6.90 7.25	6.50 7.25	6.75 7.50	6.00 7.50	6.40 10.00	8.00 9.25	7.75 8.50	8.00 8.50	8.00 9.00
1916.....	8.35 8.80	8.40 8.80	8.50 9.00	8.50 8.50	8.50 9.25	8.75 9.25	8.25 8.75	5.25 8.50	5.00 5.25	5.00 5.35	5.25 5.75	5.45 5.75
1917.....	5.30 5.75	5.40 5.50	5.75 5.90	6.00 7.75	6.75 8.40	7.25 8.00	7.50 8.50	7.60 8.00	6.50 8.25	6.75 8.25	7.00 8.50	7.00 7.50
1918.....	7.15 8.00	7.25 7.50	7.00 7.50	7.00 7.75	7.15 7.75	7.00 8.50	8.50 9.00	8.95 10.00	9.85 11.00	10.50 12.00	10.00 12.50	11.00 12.15
1919.....	11.40 11.75	10.00 11.25	11.00 11.50	10.75 13.50	13.00 14.00	12.60 13.00	12.65 13.25	12.50 12.70	12.00 12.75	12.00 12.75	12.10 12.80	12.00 12.50
1920.....	13.50 15.50	13.75 15.40	13.00 14.65	12.00 13.50	11.50 12.75	11.50 12.75	12.50 12.75	10.00 11.40	9.50 9.75	5.00 7.25	5.00 6.75	5.50 7.00
1921.....	5.50 6.75	4.50 6.25	5.00 6.75	6.00 7.65	7.00 7.85	7.00 7.30	6.25 7.50	5.90 6.75	5.50 6.00	5.75 6.75	6.00 7.50	7.00 7.25
1922.....	7.00 8.00	7.25 7.75	7.00 7.75	7.00 7.25	7.00 7.00	6.00 6.25	5.00 6.25	6.00 6.25	6.00 7.00	6.50 7.50	7.00 7.50	7.00 7.75
1923.....	7.25 7.50	7.25 7.50	7.25 7.50	7.25 7.25	7.00 7.75	7.75 7.75	.... ....	.... ....	7.60 8.00	8.00 9.50	8.00 9.00	8.00 9.00
1924.....	8.50 10.25	8.75 10.25	8.50 10.00	8.75 9.00	8.25 8.75	8.75 8.75	8.75 8.75	6.00 7.50	4.75 6.65	4.75 6.00	4.85 6.35	5.50 6.65
1925.....	5.75 6.40	5.25 6.15	5.25 5.90	5.25 6.30	5.50 6.40	6.35 7.70	6.85 7.35	6.75 7.75	6.50 7.75	6.75 7.75	6.50 7.75	6.50 8.00
1926.....	6.50 8.10	6.40 7.65	6.05 7.20	6.00 7.00	6.00 7.00	6.00 7.00	6.00 7.50	5.00 7.50	5.00 6.10	5.00 5.75	4.75 5.15	5.00 5.25
1927.....	4.85 5.75	4.50 5.25	4.50 4.75	4.25 4.75	4.00 4.25	4.00 5.50	4.00 5.50	3.50 4.75	2.25 3.75	2.25 3.25	3.25 4.50	3.25 4.50
1928.....	3.25 4.25	3.00 4.25	3.00 3.75	3.00 4.25	3.30 4.25	3.30 4.45	3.35 4.45	3.35 4.50	3.50 5.60	4.75 6.00	4.50 6.00	5.00 6.25
1929.....	5.00 6.25	5.00 6.25	5.00 6.25	5.00 6.00	5.00 6.00	5.00 6.00	4.30 6.00	3.85 5.25	4.00 5.50	4.00 5.50	5.25 6.00	5.50 6.00
1930.....	5.50 6.00	4.50 6.00	3.50 6.00	4.50 7.50	6.50 8.50	6.50 8.00	5.25 7.00	5.00 7.00	5.50 8.50	6.50 8.75	8.00 9.25	8.00 9.00
1931.....	8.00 9.00	8.75 9.75	8.25 9.75	8.00 8.75	7.50 8.75	5.50 7.50	3.50 5.50	3.00 4.00	3.00 4.00	3.00 4.00	3.00 4.00	3.75 4.25
1932.....	3.50 4.25	3.15 3.75	3.00 3.25	2.75 3.25	2.90 3.00	2.50 3.00	2.25 2.50	2.15 2.75	2.25 2.50	2.25 2.50	2.25 2.50	... ...

## NUMBER OF PLANTS TO AN ACRE

## SET AT REGULAR DISTANCES APART

Distance apart	No. Plants	Distance apart	No. Plants	Distance apart	No. Plants
3 in. by 4 in.....	522,720	3 ft. by 3 ft.....	4,840	5 ft. by 5 ft.....	1,742
4 in. by 4 in.....	392,040	3½ ft. by 3½ ft.....	3,555	5½ ft. by 5½ ft.....	1,440
6 in. by 6 in.....	174,240	4 ft. by 1 ft.....	10,890	6 ft. by 6 ft.....	1,200
1 ft. by 1 ft.....	43,560	4 ft. by 2 ft.....	3,630	6½ ft. by 6½ ft.....	1,031
1½ ft. by 1½ ft.....	19,360	4 ft. by 4 ft.....	2,722	7 ft. by 7 ft.....	888
2 ft. by 1 ft.....	21,780	4½ ft. by 4½ ft.....	2,150	8 ft. by 8 ft.....	680
2 ft. by 2 ft.....	10,890	5 ft. by 1 ft.....	8,712	9 ft. by 9 ft.....	537
2½ ft. by 2½ ft.....	6,960	5 ft. by 2 ft.....	4,356	10 ft. by 10 ft.....	435
3 ft. by 1 ft.....	14,520	5 ft. by 3 ft.....	3,904	11 ft. by 11 ft.....	360
3 ft. by 2 ft.....	7,260	5 ft. by 4 ft.....	2,178	12 ft. by 12 ft.....	302

**RULE**—Multiply the distance in feet between the rows by the distance the plants are apart in the rows, and the product will be the number of square feet for each plant or hill; which divided into the number of square feet (43,560), will give the number of plants to the acre.

## SEED VERIFICATION SERVICE BECOMING BETTER KNOWN

*(Prepared by the Bureau of Agricultural Economics)*

**T**HE U. S. Seed Verification Service became more thoroughly established during the 1931-32 season (ended July 31, 1932). The modified tag certificate, the use of which became general on January 1, 1932, has contributed in no small measure toward helping to popularize the Service. The new form of certificate makes absolutely clear what is covered in the verification and what is not. The certificate now in use reads in part as follows:

This certifies that the origin (where grown) of this lot of seed has been verified by a Federal Seed Inspector, as indicated below, and that this covers ORIGIN ONLY—NOT VARIETY, QUALITY, PURITY, or GERMINATION.

The quality of verified-origin seed probably averages better than that of non-verified-origin notwithstanding the fact that quality is not covered by the certificate. Of the samples of verified-origin seed collected, more than 77 per cent of the alfalfa and 92 per cent of the red clover samples were of good to very good quality, while less than 4 per cent of the alfalfa and none of the red clover samples were below fair in quality. The apparent superiority in quality of verified-origin seed as a whole over non-verified-origin seed may be attributed in part to the fact that low-grade seed is not eligible to carry a tag certificate.

Verified-origin seed dealers will continue to build up an ever increasing demand and will help to establish larger premiums for verified-origin seed by maintaining or raising the standard of quality. At present verified-origin seed is sold at practically the same price as or at only a slightly higher price than seed that is not verified as to origin. In other words, the verified-origin seed dealer now absorbs the larger part of the extra cost of obtaining and handling verified-origin seed.

Although the provisions governing the Service stipulate that seed from several States may be bulked or blended together and covered by a certificate, which indicates the several States of origin, so far (since 1927) over 86 per cent of the verified-origin alfalfa seed offered for sale has been certificated as of only one State of origin. About 9 per cent of the seed offered as of verified-origin has been composed of lots grown in two States, in

most of which cases the two States were adjacent or in approximately the same latitude; about 2 per cent of the verified-origin lots have been grown in three States; and about 2½ per cent have been grown in more than three States. During the past five years alfalfa seed was verified as to origin in largest quantities from States in the following order: Utah, Idaho, Montana, Kansas, South Dakota, Oklahoma, Nebraska and Colorado.

The origin of lots composed of seed from several States may be verified as effectively as are lots that have been produced in a single State. The buyer is free to draw the conclusion, if he wishes, that the larger portion of the seed in a blend or mixture was grown in that one of the States named in the certificate that is commonly considered to produce alfalfa seed which is least desirable. The relatively few verified-origin seed dealers who have been selling a number of lots of multiple origin, that is, lots made up of seed from three or more States, were requested at the beginning of this season to hold to a minimum the number of such lots, especially when those lots were composed of seed from States that are not all adjacent or that are not in a section of the country producing seed of a similar type or of the same adaptation.

Less alfalfa but more red clover seed was verified as to origin during the 1931-32 season than a year ago. The smaller quantity of alfalfa seed verified was due to the decreased quantity available for verification as a result of the decline in production, carryover of seed verified from previous crops, decreased demand for alfalfa seed last spring, relative inactivity of a few of the larger dealers in verified-origin seed, and the tendency to delay having seed verified until a prospective buyer for the seed was found. During the 1931-32 season 1,437 inspection certificates were issued, the fees for which amounted to \$8,136.07, compared with \$10,257.39 the year before, \$11,814.69 two years ago, and \$6,434.65 three years ago. Approximately 24,800,000 pounds of alfalfa and 15,200,000 pounds of red clover seed were verified as to origin during the 1931-32 season.

Sixty-five seed dealers in 21 States, or three more dealers than were enrolled at the close of last season, signed up for the 1932-33 season. The places of the three dealers who withdrew of their own accord were taken by six other dealers.

Exclusively a grower of seed for the  
wholesale trade only

●

**CABBAGE · BEET · TURNIP ·  
MANGELS · RUTABAGAS · KALE**

●

**Alf. Christianson**

**MOUNT VERNON**

**WASHINGTON**

**JEROME B. RICE SEED CO.**

CAMBRIDGE, NEW YORK, U. S. A.

**WHOLESALE SEED GROWERS AND DEALERS**

• [ We cater only to those who buy to sell again. Write for  
copy of our Descriptive Wholesale Catalogue. ] •

**COMSTOCK, FERRE & CO.**  
**Wethersfield, Conn.**

**GARDEN SEED  
FLOWER SEED**

**PEAS and BEANS  
SWEET CORN**

**ONION SEED  
ONION SETS**

*Connecticut grown Tobacco Seed  
Havana and Connecticut Seed Leaf*

**GROWERS, WHOLESALE DEALERS**

ESTABLISHED 1820

INCORPORATED 1853

EXPORTS OF CLOVER SEED  
(ALL KINDS)

Years Ending June 30

Year	Pounds
1909	16,186,133
1910	6,977,685
1911	4,359,167
1912	1,874,682
1913	5,407,594
1914	4,640,852
1915	9,750,064
1916	7,116,220
1917	5,886,893
1918	9,439,314
1919	7,770,582
1920	5,061,792
1921	5,419,838
1922	4,007,233
1923	4,331,153
1924	784,471
1925	1,862,925
1926	973,109
1927	1,992,906
1928	1,838,783
1929	615,045
1930	1,439,547
1931	1,057,461
1932	723,018

EXPORTS OF TIMOTHY SEED

Years Ending June 30

Year	Pounds
1909	26,342,842
1910	18,044,488
1911	7,893,121
1912	11,111,807
1913	3,542,705
1914	13,689,707
1915	17,646,273
1916	12,428,140
1917	15,139,913
1918	8,564,384
1919	11,673,029
1920	15,304,646
1921	14,989,518
1922	20,150,357
1923	20,131,903
1924	15,501,856
1925	16,457,687
1926	9,942,494
1927	14,060,447
1928	17,677,670
1929	8,631,395
1930	12,123,110
1931	13,594,818
1932	13,948,236

EXPORTS OF RED CLOVER  
SEED

By Calendar Years

*Prepared from data obtained by the Bureau  
of Foreign and Domestic Commerce,  
U. S. Department of Commerce*

Year	Pounds
1922	2,015,891
1923	800,550
1924	516,225
1925	415,921
1926	583,980
1927	1,279,867
1928	455,738
1929	523,535
1930	535,472
1931	670,304
1932*	108,932

\*Six months ended June 30, 1932.

EXPORTS OF ALFALFA SEED

By Calendar Years

*Prepared from data obtained by the Bureau of  
Foreign and Domestic Commerce, U. S.  
Department of Commerce*

Year	Pounds
1922	1,025,129
1923	399,346
1924	363,269
1925	1,332,992
1926	741,516
1927	1,393,474
1928	781,920
1929	825,830
1930	832,965
1931	218,044
1932*	93,309

\*Six months ended June 30, 1932.

**DURYEASEED CO., INC.**

**NEW YORK, N. Y.**

**IMPORTERS • EXPORTERS**

WE SPECIALIZE IN

*Red Clover  
White Clover  
Alsike Clover*

*Timothy  
Redtop  
Blue Grass*

*Rye Grasses  
Bent Grasses  
Fescues*

*Vetches  
Lawn Seed  
Bird Seed*

Cable address—DURYEASEED—NEWYORK



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**SINCE 1886**

We have been confining our efforts to producing better stocks of biennial vegetables for the Seed Trade and its customers.

With our breeding grounds on Long Island and growing stations in various parts of the country efficiently organized, we are in a position to give each item careful attention.

WE SELL  
OUR PRODUCT  
ONLY THROUGH  
THE SEED TRADE

**BEETS, TURNIP,  
KALE, CABBAGE, etc.**

**J. M. Lupton & Son, Inc.**

**Mattituck**

**L. I., N. Y.**

*Branches in Other Growing Sections*

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YOKOHAMA, JAPAN

*Growers of*  
**FLOWER AND VEGETABLE  
SEEDS**

**THE REAL NOVELTY**



**PETUNIA, SAKATA'S ALL-DOUBLE GIANT FRINGED**

**"A strain which never failed to produce 100% Double-flowering plants of exceptional quality in our trials"**

**BULK FLOWER SEED:**

Aster	Kudzu Vine
Bachelor Button	Marigold
Balsam	Morning Glory
Calliopsis	Pansy
Cockscomb	Petunia
Chinese Lantern	Phlox
Cosmos	Salvia
Cypress Vine	Straw Flower
Dahlia	Verbena
Four O'Clock	Vinca
Kochia	Zinnia

**FINER FLOWER SEED:**

Balsam Camellia-fl. in color  
Celosia Cristata dwarf and tall  
Celosia Plumosa Thompson Magnifica, extra fine quality  
Coleus, extra fine  
Lily Seed in variety  
Myosotis in variety  
Petunia, double and single, Giant-fl. in exquisite quality, none better in the market.  
Phlox Drummondii, tall and dwarf in color.  
Double Portulaca, mixed and in color. The highest in doubleness.

PRICES FOR CONTRACT OR  
DELIVERY FROM NEW YORK  
AND YOKOHAMA STOCKS  
QUOTED BY

**HERBST BROTHERS, Inc.**

**92 WARREN STREET**

**NEW YORK, N. Y.**

Agents for United States and Canada

## LOCATION OF SEED LABORATORIES

Many seedsmen use state and Government seed laboratories for the testing of their various lots of seeds, both for purity and germination. The following table lists the various state and Government seed laboratories in United States and Canada.

STATE	CITY	LOCATION
ALABAMA .....	Montgomery .....	Department of Agriculture
ARIZONA .....	Tucson .....	Agricultural Experiment Station
ARKANSAS .....	Fayetteville .....	Agricultural Experiment Station
CALIFORNIA .....	Sacramento .....	State Department of Agriculture
COLORADO .....	Fort Collins.....	Agricultural Experiment Station
CONNECTICUT ....	New Haven .....	Agricultural Experiment Station
DELAWARE .....	Dover .....	State Board of Agriculture
IDAHO .....	Boise .....	State Capitol
ILLINOIS .....	Springfield .....	Department of Agriculture
INDIANA .....	Lafayette .....	Agricultural Experiment Station
IOWA .....	Des Moines .....	State Department of Agriculture
KANSAS .....	Manhattan .....	State Board of Agriculture
KENTUCKY .....	Lexington .....	Agricultural Experiment Station
LOUISIANA .....	Baton Rouge.....	State Board of Agriculture
MAINE .....	Orono .....	Agricultural Experiment Station
MARYLAND .....	College Park.....	Agricultural Experiment Station
MASSACHUSETTS..	Amherst .....	Agricultural Experiment Station
MICHIGAN .....	Lansing .....	State Department of Agriculture
MINNESOTA .....	St. Paul .....	State Department of Agriculture
MISSISSIPPI .....	Jackson .....	State Department of Agriculture
MISSOURI .....	Columbia .....	Agricultural Experiment Station
MONTANA .....	Bozeman .....	Agricultural Experiment Station
NEBRASKA .....	Lincoln .....	Department of Agriculture
NEVADA .....	Reno .....	State Bureau of Plant Industry
NEW HAMPSHIRE..	Durham .....	Agricultural Experiment Station
NEW JERSEY.....	New Brunswick.....	Agricultural Experiment Station
NEW MEXICO.....	State College.....	Agricultural Experiment Station
NEW YORK.....	Geneva .....	Agricultural Experiment Station
NORTH CAROLINA	Raleigh .....	Department of Agriculture
NORTH DAKOTA..	Fargo .....	State Seed Dept.
OHIO .....	Columbus .....	Department of Agriculture
OKLAHOMA .....	Oklahoma City.....	Board of Agriculture
OREGON .....	Corvallis .....	Agricultural Experiment Station
PENNSYLVANIA ..	Harrisburg .....	Department of Agriculture
RHODE ISLAND...	Providence .....	Bureau of Markets
SOUTH CAROLINA	Columbia .....	Department of Agriculture
SOUTH DAKOTA..	Brookings .....	Agricultural Experiment Station
TENNESSEE .....	Nashville .....	State Department of Agriculture
TEXAS .....	Austin .....	State Department of Agriculture
UTAH .....	Salt Lake City.....	State Board of Agriculture
VERMONT .....	Burlington .....	Agricultural Experiment Station
VIRGINIA .....	Richmond .....	Department of Agriculture
WASHINGTON ....	Pullman .....	Agricultural Experiment Station
WASHINGTON,D.C.		Bureau of Plant Industry, U. S. Department of Agriculture
WEST VIRGINIA...	Morgantown .....	Agricultural Experiment Station
WISCONSIN .....	Madison .....	Department of Agriculture
WYOMING .....	Laramie .....	Agricultural Experiment Station
CANADA .....	Calgary .....	Seed Branch, Dept. of Agriculture
CANADA .....	Ottawa .....	Seed Branch, Dept. of Agriculture
CANADA .....	Winnipeg .....	Seed Branch, Dept. of Agriculture
CANADA .....	Toronto .....	Seed Branch, Dept. of Agriculture
CANADA .....	Sackville .....	Seed Branch, Dept. of Agriculture
CANADA .....	Montreal .....	Seed Branch, Dept. of Agriculture
CANADA .....	Saskatoon .....	Seed Branch, Dept. of Agriculture

All states indicated above have laws regulating the sale of seeds. Copies of the laws may be obtained by communicating with the various departments as indicated above. Information regarding state seed laws may be obtained by writing to Seed World, 325 W. Huron St., Chicago.

## SEEDSMEN'S LEGAL QUESTIONS ANSWERED

During the past fifteen years Seed World has conducted a Legal Department, in which subscribers' questions have been answered and current court decisions of interest to the seed trade have been discussed. Believing that the questions that have arisen most frequently in the past are likely to continue to be encountered by the seed trade we have had our attorney, Herbert Bebb, prepare the following selection and condensation from the Legal Department material.

### Catalog Delay

*Question:* We figure that we have lost some sales due to failure of our printer to deliver our catalogs on the agreed date. Are we entitled to recover such lost profits?

**ANSWER:** In Drumm Seed Co. vs. McFarland, 30 S. W. 93, the Court held that before such lost profits can be allowed "the amount of loss thus sustained must be shown with reasonable accuracy and the instances in which it would be possible to make this proof must necessarily be exceptional." In view of the difficulty in proving such damages we advise the inclusion of a liquidated damages clause in important printing contracts.

### Commission Seeds

*Question:* What protection does the wholesaler have against a bulk sale of commission seed stand and packets or against their being levied upon by a judgment credit of the retail dealer who has them on consignment?

**ANSWER:** The consignee of a stand of commission seeds is legally a "Bailee". In our opinion his authority to sell the packets separately at retail does not amount to a representation by the wholesaler that he has authority to sell or pledge the entire stand. See Romeo vs. Martucci, 72 Con. 504.

### Corporate License

*Question:* In connection with our commission seed business should our corporation be licensed to do business in those states in which we will place our stands or boxes?

**ANSWER:** By the weight of authority sales by a consignee of goods received from a consignor out of the state are regarded as Interstate Commerce and hence a corporate consignor need not be licensed to do business in the state in which the sales are made. See Butler Brothers vs. U. S. Rubber Company, 156 Federal 1.

### Crop Failure

*Question:* Does a crop failure excuse us from furnishing strawberry plants which we have contracted to furnish at this season?

**ANSWER:** No. If you unconditionally undertook to furnish a certain number of plants without stating where they were coming from or otherwise connecting your liability with the supply then you would remain liable despite the crop failure.

### Damages

*Question:* What is the proper measure of damages for loss of crop because of faulty seed?

**ANSWER:** Where a crop is produced upon which expected profits can be estimated the proper measure of damages is the difference in value between the crop grown and the crop that would have been grown if the seed had been according to contract. If no crop is produced then the measure of damages includes (1) the purchase price; (2) the rental value of the land; (3) the labor in preparing, sowing, cultivating; (4) hauling the seed from the place of purchase. See Lundquist vs. Jennison, 214 Pac. 67.

### Disclaimer, Custom

*Question:* Where there is no non-warranty clause in the written contract, can the seedsman defend on the theory that the parties must be understood to have dealt with reference to the general non-warranty custom?

**ANSWER:** Yes. The tendency of recent decisions, particularly in the West, has been strongly in the direction of recognizing the non-warranty custom, thus in effect incorporating the disclaimer clause into seed contracts. The most recent decision along this line was Hoover vs. Utah Nursery Company, 7 Pac. (2nd) 270, in which earlier authorities are discussed, particularly the exhaustive opinion in Miller vs. Germain Seed & Plant Company, 193 Cal. 162. Other cases are cited in 37 LRANS 79; An. Cas. 1918 B71; 16 ALR. 859, which will be found in any large law library. Most of the cases giving effect to the disclaimer custom have been from west of the Mississippi River but during the past year New York was added to the list by an important decision in Lumbrazo vs. Woodruff, 256 N. Y. 92. Some of the refusals to give effect to the disclaimer custom may be attributed to failure of the seedsman and his attorneys to make sufficient proof as to the existence of the custom. Such a case will be found in National Seed Company vs. Leavell, 259 S. W. 1035. In American Warehouse Company vs. Ray (1912 Texas Civil Appeals), 150 S. W. 763, it was held that the disclaimer custom could have no effect unless it was to show that the plaintiff "had knowledge of such custom or contracted with it in view."

### Disclaimer, Location

*Question:* Where should the disclaimer be placed?

**ANSWER:** On your letterheads and on all forms on which contracts may be drawn, we advise placing the disclaimer in such a location that it will read as a part of the contract. Some cases hold that obscurely printed conditions above the salutation upon a letterhead will not be read into a contract written thereon. One such case is Sturtevant Co. vs. Fireproof Co., 216 N. Y. 199. On the other hand, it was held in Poel vs. Brunswick Co., 216 N. Y. 310, that such printed additions, if sufficiently prominent, will be taken as part of the contract. Rodesch vs. Kirkpatrick Coal Company, 41 Fed. (2nd) 518, is a similar case.

Placing the disclaimer on tags and invoices is not alone enough since on most sales the contract has been closed before these papers come to the buyer's attention. See Edgar vs. Breck, 172 Mass. 581, and Werd vs. Valke, 176 N. W. 129.

### Disclaimer, Relation to Pure Seed Law

*Question:* Is it permissible to put the standard disclaimer on the tag required by the uniform Pure Seed Law?

**ANSWER:** We understand that some state officials have taken the position that such use of the disclaimer is inconsistent with the spirit of the requirement that certain information be placed on the tag. In Mangelsdorf Seed Company vs. Busby (1926 Okla.), 247 Pac. 410, the Court held that

the seed company "had a clear right to meet this issue of implied warranty by proof tendered of an express non-warranty." Although the presence of the disclaimer on a tag was not involved, the case did arise under the Pure Seed Law and if the disclaimer can be proved when used separately, we see no legal reason why it should not appear on the tag provided it is so used as not to obscure the statutory data.

### Disclaimer, on Retail Sales

*Question: If a retailer sells over the counter seeds in packages bearing a wholesaler's disclaimer is the retailer protected by such disclaimer?*

ANSWER: No, the retailer in such case would not be protected by the express disclaimer although he might defend on proof of a general custom not to warrant. See *Jolly vs. Blackwell*, 211 Pac. 748.

Authorities as to the liability of the producer to the ultimate consumer who purchased from a middleman are cited and discussed in 39 A. L. R. 1000 and in 17 A. L. R. 672. The editor points out that an early case permitting the sub-purchaser to enforce warranties against the producer has been repudiated and that unless the facts involve a tort liability the sub-purchaser must look only to the retailer with whom he dealt.

### Disclaimer, Standard Wording

*Question: What is the official wording of the Seed Trade Disclaimer Clause?*

ANSWER: "The ..... Company gives no warranty, express or implied, as to description, quality, productiveness, or any other matter of any seeds, bulbs, or plants it sells, and will not be responsible for the crop."

### Disclaimer, Variations in Wording

*Question: We feel that the wording of the standard disclaimer is abrupt and harsh. We contemplate substituting a statement emphasizing the care that we take but pointing out that we have no control over conditions of cultivation. Would you approve of such changes?*

ANSWER: While we sympathize with your reluctance to employ wording which emphasizes only the negative aspects of your engagement, we nevertheless advise sticking to the standard wording. There is danger that you might fail to cover the entire ground or that your new wording might involve ambiguities that would not occur to you. More important than this is the point that the use of uniform wording by the entire trade is an advantage, first, to the trade since each seedsman using the clause is strengthening the custom theory on which many cases are being favorably decided and, second, to the individual since it is to the interest of each seedsman to bring himself squarely within the protection of this uniform custom.

### General Statement of Law

*Question: Where may I read a general introductory statement of law applicable to warranties of seeds?*

ANSWER: You will find such a statement in the introduction to the annotation to *Johnson vs. Foley Company*, in 16 A. L. R. 859. We may summarize a part of that statement as follows. Most seed contracts are sufficiently descriptive to indicate that the subject of sale is to be used for planting. This gives rise to an obligation which some courts call an "express warranty," other an "implied warranty," and still others a "condition." Since this obligation of the

seller survives acceptance at least as to defects which inspection would not disclose, the distinction is often disregarded. The fact that the buyer cannot determine by inspection whether the articles tendered by the seller comply with the contract is the reason for the exceptional rule applied to sale of seeds that in absence of an express disclaimer a warranty will be implied.

### Growers Contract

*Question: Can you give us a good form for a contract between a seedsman and a grower?*

ANSWER: The form used by the Ferry-Morse Seed Company has stood the test of successful litigation in *Ferry vs. Forquer*, 202 Pac. 193, and *Ferry vs. Smith*, 209 Pac. 1066. That form is as follows:

..... Seed Co. .... P.O. .... State  
..... 19..

I.....agree, on the terms and conditions stated below, to raise for you, on lands of suitable quality and condition, located in Section.....Township of.....County of.....and State of.....and to deliver to you at.....the following seeds: .....

I agree properly to prepare and plant such lands with Stock Seed to be furnished by you at .....; properly to cultivate and care for the crop; to harvest, cure, separate and clean, as well as possible with ordinary farm machinery, its entire seed product, in such manner as to secure the greatest possible return of seeds suitable for Seedsman's use; and to sack and deliver all the seed to you at....., as soon as the seed can be put in suitable condition, and before November 30, 19...., without wasting, feeding, selling, reserving or allowing any portion of the crop or seed furnished to pass from my possession except as delivered to you. You are to pay all freight charges on stock seed, crop and on any bags you send me. The stock seed and seed crop produced from it is, and shall remain your property except as otherwise stated in this contract.

In order to prevent hybridization and to keep the crop pure, I agree that during the life of this contract I will not grow Seeds of the same species for any other person, and as far as I am able to prevent it, there shall be no other plants of the same species grown within ten rods of this crop. I will take at all times every reasonable precaution to keep the crop pure and to prevent seed of any chance plants of a different variety or of a stock of the same variety different from that sent me by you, becoming mixed with seeds grown under this agreement. You or your agents may at any time enter the field and, at your own expense, make such examination, selections or rejections as you or they deem desirable for the betterment of the crop for seed purposes, and you or they shall not be liable for necessary damage, if any, to my crop resulting from such work.

You are carefully to weigh and test the crop upon its delivery. Any remilling is to be done by you at your expense. You may refuse to accept the crop if less than eighty-five per cent (85 per cent) of the seeds are vital, or if in your judgment the crop is in any other respect unfit for Seedsman's use and cannot be made fit without an unreasonable amount of cleaning or hand picking. In case of dispute as to vitality, it is agreed that a sample of the seeds may be submitted to the United States Department of Agriculture for testing, and the report of the Department of Agriculture on the sample submitted shall be final and binding on both of us. The sample shall be taken from the seeds as they stand in your warehouse, by drawing a sample from each sack, then thoroughly mixing the same, and taking a sample from the mixture, which shall be sent by the ordinary course of mail or otherwise to the Department of Agriculture at Washington, D. C. In case you refuse to accept the crop, its title shall vest in me and in such event or in case of loss of stock seed through crop failure or otherwise I agree to reimburse you immediately for stock seed and bags furnished, and for all freight charges paid by you on any rejected crop. If, within 60 days after you mail me notice of refusal to accept the seeds, you do not receive directions from me as to their disposition, you may dispose of them as you wish.

In consideration of the faithful carrying out of this Agreement by me and as full compensation

for my services, you are to pay me at the rate of .....per necessary weight to give 100 pounds of hand-picked ..... for all seed in excess of the Stock Seed furnished me, delivered under this contract and accepted by you; payment to be made immediately upon your acceptance of the seed. No payment is to be made for any seed which you do not consider sufficiently pure, clean and dry for Seedsman's use and no credit is to be given for dirt, or for damaged or poor seed which has to be removed. In all cases, the screenings and culls are to remain the property of the party who separates them from the crop.

If so requested in writing, you shall loan for my use free of charge, suitable bags for shipping the crop, or you shall allow me full wholesale market value for all new, sound, undefaced, seamless cotton grain bags which I may buy and you receive containing the crop.

This letter, when accepted by you, shall constitute our contract, and be construed according to.....laws. There are no agreements or understandings regarding the subject matter of this letter other than expressed above.

Yours truly,

Accepted at.....this ..... day of.....19....

.....Seed Co.  
By.....

In Thiel vs. Pac. Fruit & Produce Co., 4 Pac. (2nd) 356, a seedsman was defeated because he had failed to incorporate in his contract a reservation of title such as is included in the Ferry form. See also Robinson vs. Stricklin, 73 Nebr. 242.

### Notice of Defects

*Question: Can a buyer of warranted seed, in the face of knowledge that the seed is faulty, plant it and recover crop damage?*

ANSWER: No. In Tomita vs. Johnson (Idaho), 290 Pac. 395, it was shown that an experienced potato grower knew from cutting into the seed potatoes that they were diseased, and the Court held "under these facts he cannot recover crop damage resulting from planting the diseased seed in question."

### Plant Patents

*Question: What are the statutory limitations upon plant patents?*

ANSWER: The Patent Law in Sec. 4886 provides that "any person who has invented or discovered any new and useful art, machine \* \* \* or who has invented or discovered and asexually reproduced any distinct and new variety of plant, other than a tuber-propagated plant, not known or used by others may, upon payment of the fees required by law \* \* \* obtain a patent." The limitation to asexual reproduction means that the plants of most importance economically are excluded. For example, our common cereals being reproduced by seed and not by cuttings cannot be patented. The "tuber-propagated" wording is for the purpose of excluding potatoes. It should be noted that the wording of the statute requires that mechanical patents be "useful" but that this word does not appear in the phraseology relating to plant patents.

### Trade Mark; Variety Name

*Question: We have originated a new variety of sweet corn. Can we prevent competition by trade marking the name?*

ANSWER: No. The name which you give to your new variety will become in substance a descriptive name and can be used as such by any person to describe seed from the same strain. The proper function of a trade mark is simply to identify the producer or origin of goods. In general a descriptive name is not available for registration as a trade mark. See Hoyte vs. Lovett, 71 Federal 173, 178.

# AMERICAN BULB COMPANY

CHICAGO-NEW YORK

*Growers and Distributors*

**'Lone Star'**

(Texas Grown)

**NARCISSUS  
PAPER WHITES**

There is a valuable market for all seed merchants in the sale of these easily grown "home bulbs." "Lone Star" brand is thoroughly dependable—every bulb is guaranteed to give perfect blooms. We have sold over 15,000,000 of these bulbs to the entire satisfaction of all purchasers. These bulbs have been tested and proven by every State Horticultural College in the country. Write us for details for coming season.

We can advantageously supply the seed trade with a complete assortment of all foreign and domestic bulbs for Spring and Fall delivery.

Seasonable Catalogs  
Mailed Free

**AMERICAN BULB CO.**

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31 TO 37 WEST 27TH ST.  
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*We* specialize in imported and home grown grass seeds, bents, fescues, poa trivialis, rye grass, blue grass, orchard grass, redtop.

**O. M. SCOTT & SONS CO.**  
Marysville, Ohio.

# MOUNTAIN GROWN SEEDS



Earlier Maturity, Stronger Vitality and Freedom from Fungus Diseases combined with careful breeding and type selection.

## "MILE HIGH" SEEDS

Beans, Sweet Corn, Cucumber, Lettuce, Muskmelon, Cantaloupe, Onion, Pepper, Pumpkin, Squash, Tomato, Columbine, Zinnia, etc.

THE GRAND JUNCTION SEED CO., Grand Junction, Colorado

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**PATENT ATTORNEYS**  
*in United States and Canada*  
*Agents in Foreign Countries*

Patents — Trade Marks —  
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All Matters Receive  
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mation and Record of  
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Trade Since 1899.  
Also specializing in  
Crotalaria Spectabilis  
Seed, the legume re-  
quiring no inoculation.



**I GROW THE SEED I SELL**

# TRADE MARKS AND SLOGANS

MANY SEEDSMEN as well as manufacturers have spent years in building up a demand for their trade-marked items and buyers have for years bought on these brands. At times a buyer does not remember the name of the manufacturer or seedsman who produces a certain brand. This alphabetical list of trade-marked brands should prove useful.

## SEEDS

- Acme**—seeds—J. Chas. McCullough Seed Co., Cincinnati, Ohio.
- Aero**—garden, flower and field seeds—Griswold Seed & Nursery Co., Lincoln, Nebr.
- Ah**—cauliflower seed—A. Hansen, Kastrup, Denmark.
- Antelope**—seeds—Nebraska Seed Co., Omaha, Nebr.
- Asgrow**—seeds—Associated Seed Growers, Inc., New Haven, Conn.
- Beaver**—timothy seed—Steele, Briggs Seed Co., Toronto, Ont., Can.
- Blackfoot**—alfalfa seed—Idaho Grimm Alfalfa Seed Growers Assn., Blackfoot, Idaho.
- Blackfoot**—alfalfa seed—W. H. Crossland, Milwaukee, Wis.
- Blood Tells**—seeds—Rogers Bros. Seed Co., Chicago, Ill.
- Buckeye**—seeds—The J. M. McCullough's Sons Co., Cincinnati, Ohio.
- Budapest Monor**—seeds—Hungarian Seed-culture Co., Ltd., Budapest, Hungary.
- Buist's Prize Medal**—garden seeds—Robt. Buist Co., Philadelphia, Pa.
- Burpeeana**—seeds—W. Atlee Burpee Co., Philadelphia, Pa.
- Burpee's Seeds Grow**—W. Atlee Burpee Co., Philadelphia, Pa.
- Central Park**—lawn seed—The J. M. McCullough's Sons Co., Cincinnati, Ohio.
- Clause**—seeds—L. Clause, Bretigny-sur-Orge, France.
- Colonial Boy**—garden seeds—D. Landreth Seed Co., Bristol, Pa.
- Columbia Park**—lawn grass seed—Duryea Seed Co., Inc., New York, N. Y.
- Crystal**—field seeds—Minneapolis Seed Co., Minneapolis, Minn.
- Daehnfeldt's**—seeds—L. Daehnfeldt & Theo. Jensen, Odense, Denmark.
- Dependability**—watermelon seeds—D. H. Gilbert, Monticello, Fla.
- Duryea's Central Park**—lawn grass seed—Duryea Seed Co., Inc., New York, N. Y.
- Eagle**—alsike seed—Steele, Briggs Seed Co., Toronto, Ont., Can.
- Ermine**—timothy seed—Steele, Briggs Seed Co., Toronto, Ont., Can.
- Evergreen**—lawn green seed—Duryea Seed Co., Inc., New York, N. Y.
- Falcon**—field seeds—Minneapolis Seed Co., Minneapolis, Minn.
- Floradale**—seeds—W. Atlee Burpee Co., Philadelphia, Pa.
- Fordhook**—seeds—W. Atlee Burpee Co., Philadelphia, Pa.
- Gladflower**—flower seeds—W. Atlee Burpee Co., Philadelphia, Pa.
- Goldinhart**—seeds—W. Atlee Burpee Co., Philadelphia, Pa.
- Gold Medal**—field seeds—Louisville Seed Co., Louisville, Ky.
- Gramercy Park**—lawn grass seed—Duryea Seed Co., Inc., New York, N. Y.
- Greene Park**—lawn grass seed—Page Seed Co., Greene, N. Y.
- Havalawn**—grass seed—St. Louis Seed Company, St. Louis, Mo.
- Hawk**—alsike seed—Steele, Briggs Seed Co., Toronto, Ont., Can.
- Hawk-Eye**—field seeds—Hamilton Seed & Coal Company, Cedar Rapids, Iowa.
- Isbell**—seeds—Isbell Seed Co., Jackson, Mich.
- J. Chas. McCullough Seed Co.**—seeds—J. Chas. McCullough Seed Co., Cincinnati, Ohio.
- K**—field seeds—H. C. King & Sons, Battle Creek, Mich.
- Keystone**—seeds—Corneli Seed Co., St. Louis, Mo.
- Lago**—garden seeds—F. Lagomarsino & Sons, Sacramento, Calif.
- Landreth's**—garden seeds—D. Landreth Seed Co., Bristol, Pa.
- Leonard's Seeds**—Leonard Seed Co., Chicago, Ill.
- Lilly's**—seeds—Chas. H. Lilly Co., Seattle, Wash.
- Lion Brand**—red clover seed—Steele, Briggs Seed Co., Toronto, Ont., Can.
- Lone Star**—bulbs—American Bulb Co., Chicago, Ill.
- McCullough's Seeds**—The J. M. McCullough's Sons Co., Cincinnati, Ohio.
- M**—field seeds—Ed. F. Mangelsdorf & Bro., St. Louis, Mo.
- Marvelawn**—grass seed—Page Seed Co., Greene, N. Y.
- Meeters**—onion sets—Meeters Inc., Lansing, Ill.
- Mile High**—seeds—Grand Junction Seed Co., Grand Junction, Colo.
- Milford**—grass seed—F. H. Woodruff & Sons, Milford, Conn.
- Milford Green**—lawn seed mixture—F. H. Woodruff & Sons, Milford, Conn.
- "Nasiona"**—seeds—"Nasiona," Danzig.
- Never Die**—lawn grass seed—D. Landreth Seed Co., Bristol, Pa.
- Old English**—lawn seed—Philadelphia Seed Co., Philadelphia, Pa.
- Old Homestead**—lawn grass seed—Duryea Seed Co., Inc., New York, N. Y.
- Oscro**—brand seeds—Ouren Seed Co., Council Bluffs, Iowa.
- Our Seeds Grow Friends**—seeds—Washburn-Wilson Seed Co., Moscow, Idaho.
- P**—seeds—A. S. Paterson & Co., Ltd., Dunedin, New Zealand.
- Par Four**—lawn seed—The J. M. McCullough's Sons Co., Cincinnati, Ohio.
- Paseco**—seed corn—Page Seed Co., Greene, N. Y.
- Patriot**—field seeds—Seaboard Seed Co., Philadelphia, Pa.
- Pedigree Seeds**—seeds—D. Landreth Seed Co., Bristol, Pa.

**Platte**—seeds—Nebraska Seed Co., Omaha, Nebr.  
**Purseed**—seeds—Blamberg Bros., Inc., Baltimore, Md.  
**P—WSCO**—garden seeds—Pieters-Wheeler Seed Co., Gilroy, Calif.  
**Quaker**—field seeds—Philadelphia Seed Co., Philadelphia, Pa.  
**Radway's Central Park**—lawn seed—I. L. Radwaner Seed Co., New York N. Y.  
**Radway's Tested Seeds**—I. L. Radwaner Seed Co., New York, N. Y.  
**Rival**—garden, field and flower seeds, Chesmore Seed Co., St. Joseph, Mo.  
**Sealed Color-Tru**—tomato seed—Haven Seed Co., Santa Ana, Calif.  
**Security**—field seeds—Minneapolis Seed Co., Minneapolis, Minn.  
**Seeds That Grow**—W. Atlee Burpee Co., Philadelphia, Pa.  
**Seeds Which Succeed**—seeds—D. Landreth Seed Co., Bristol, Pa.  
**Sickle**—seed—I. L. Radwaner Seed Co., New York, N. Y.  
**Stork**—field seeds—Minneapolis Seed Co., Minneapolis, Minn.  
**Suburban**—lawn seed—The J. M. McCullough's Sons Co., Cincinnati, Ohio.  
**Suhr's Seed Sure Success**—garden seeds—E. Suhr Co., New York, N. Y.

**Sunnybrook**—seeds—W. Atlee Burpee Co., Philadelphia, Pa.  
**"Sure-to-Grow"**—The Better Plant Products—Mount Arbor Nurseries, Shenadoah, Iowa.  
**Tiger**—red clover seed—Steele, Briggs Seed Co., Toronto, Ont., Can.  
**Turfmaker**—lawn seed mixture—F. H. Woodruff & Sons, Milford, Conn.  
**Utryit**—seeds—The Nebraska Seed Co., Omaha, Nebr.  
**Ver-E-Best**—seeds—Market Gardeners' Seed Co., Cincinnati, Ohio.  
**Village Green**—lawn grass mixtures—Dur-yea Seed Co., Inc., New York, N. Y.  
**Wab**—seeds—W. Atlee Burpee Co., Philadelphia, Pa.  
**Washington Park**—lawn seed—The J. M. McCullough's Sons Co., Cincinnati, Ohio.  
**Wolf**—red clover seed—Steele, Briggs Seed Co., Toronto, Ont., Can.  
**Woodeo**—lawn seed mixture and grass seed—F. H. Woodruff & Sons, Milford, Conn.  
**Woodland Path Shady**—lawn seed—The J. M. McCullough's Sons Co., Cincinnati, Ohio.  
**XXXX**—seeds—The J. M. McCullough's Sons Co., Cincinnati, Ohio.  
**Yorkshire Park**—lawn grass seed—Dur-yea Seed Co., Inc., New York, N. Y.

## ALLIED LINES

**Acme**—mole traps—C. E. Grelle, Green Hills, Portland, Ore.  
**Agate**—seed scale—Henry Troemner, Philadelphia, Pa.  
**AJP Crow Dope**—crow repellent—A. J. Phillips Co., Norwood, N. Y.  
**Anco Brand Nicotinum**—insecticide—Nicotine Mfg. Co., St. Louis, Mo.  
**Androck**—plant supports—Michigan Wire Goods Co., Niles, Mich.  
**Annia Germ**—fumigant and insecticide—Douglas Chemical & Supply Co., Kansas City, Mo.  
**Ansul Colloidal Sulphur**—fungicide—Ansul Chem. Co., Marinette, Wis.  
**Ansul Formaldehyde Dust**—seed and soil treating compound—Ansul Chemical Co., Marinette, Wis.  
**Ant Gas**—ant exterminator—Hammond Paint & Chemical Co., Beacon, N. Y.  
**Aristocrat**—seed bags—Miller, Tompkins & Co., New York, N. Y.  
**Atlacide**—Chlorate weed killer—Chipman Chemical Co., Inc., Bound Brook, N. J.  
**Atlas "A"**—arsenical weed killer solution—Chipman Chemical Co., Inc., Bound Brook, N. J.  
**Atlas**—Cattle Dip—Chipman Chemical Co., Inc., Bound Brook, N. J.  
**Awine**—pyrethrum spray—Andrew Wilson, Inc., Springfield, N. J.  
**Banner**—poultry feed—Ouren Seed Co., Council Bluffs, Iowa.  
**Bates**—tying tools and wire bag ties—St. Regis Paper Co., New York, N. Y.  
**Beware**—bee supplies—G. B. Lewis Co., Watertown, Wis.  
**Bemis-A**—cotton seamless bags—Bemis Bro. Bag Co., St. Louis, Mo.  
**Bemis Special**—threads—Bemis Bro. Bag Co., St. Louis, Mo.  
**Bird Neponset**—flower pots, covers and earth bands—Bird & Son, Inc., East Walpole, Mass.  
**Black Leaf 40**—insecticide and poultry lice killer—Tobacco By-Products & Chemical Corp., Louisville, Ky.

**Bor-tox**—boring insect control—Andrew Wilson, Inc., Springfield, N. J.  
**Brown**—bag filling machine—Brown Bag Filling Machine Co., Fitchburg, Mass.  
**Brownie**—seed bags—Miller, Tompkins & Co., New York, N. Y.  
**Buhler**—patented vibrationless sieve drives—S. Howes Co., Silver Creek, N. Y.  
**Bull Dog**—seed bags—Miller, Tompkins & Co., New York, N. Y.  
**Burpee**—Home Canning equipment—Burpee Can Sealer Co., Chicago, Ill.  
**Calgreen**—arsenical insecticide—Chipman Chemical Co., Inc., Bound Brook, N. J.  
**Carus Manganese Sulfate**—fertilizer, plant food—Carus Chemical Co., La Salle, Ill.  
**Caseade**—vertical seed mixers—S. Howes Co., Silver Creek, N. Y.  
**Cattle Comfort**—stock spray—Hammond Paint & Chemical Co., Beacon, N. Y.  
**Celophane**—seed enclosure—I. L. Radwaner Seed Co., New York, N. Y.  
**Champion**—peanut pickers—Ellis Keystone Agri. Works, Pottstown, Pa.  
**Champion**—scoops—Michigan Wire Goods Co., Niles, Mich.  
**Champion**—weighing and filling machines—S. Howes Co., Silver Creek, N. Y.  
**Chipman**—fungicides, insecticides and weed killers—Chipman Chemical Co., Inc., Bound Brook, N. J.  
**Clark's**—parapin wax, melters, dip tanks—Walter E. Clark & Son, Milford, Conn.  
**Clo-Trate**—concentrated cod liver oil—Health Products Corp., Newark, N. J.  
**Collie**—seed bags—Miller, Tompkins & Co., New York, N. Y.  
**Cubor Dust**—non-poisonous insecticide—Chipman Chem. Co., Inc., Bound Brook, N. J.  
**Cubor**—fly killer and rotonone pyrethrum plant spray—Chipman Chemical Co., Inc., Bound Brook, N. J.  
**Disbrow Seal Brand**—seed packets and bags—Disbrow Mfg. Co., Newark, N. J.  
**Dixie**—chick feeder—Hoeft & Co., North Chicago, Ill.

- Dutox**—non-arsenical insecticide—Grasselli Chemical Co., Cleveland, Ohio.
- Eezy-Wear**—garden gloves—National Glove Co., Columbus, Ohio.
- Ellis Champion**—grain threshers—Ellis Agricultural Works, Pottstown, Pa.
- Eureka**—seed cleaners, separators and graders, lawn seed mixers, scarifiers and other seed processing machinery—S. Howes Co., Silver Creek, N. Y.
- Everlastic**—glazing bedding putty—Hammond Paint & Chemical Co., Beacon, N. Y.
- Farm-Aids Dust Kote**—moist inoculant—Farming Aids, Inc., Milwaukee, Wis.
- Floral Park**—seed scale—James Bronis, New York, N. Y.
- Fly-Away**—spray—Hammond Paint & Chemical Co., Beacon, N. Y.
- Fumigato**—fumigant—Douglas Chemical & Supply Co., Kansas City, Mo.
- Fung-O**—liquid fungicide—Andrew Wilson, Inc., Springfield, N. J.
- Four-In-One**—percentage scale—Seed Trade Reporting Bureau, Chicago, Ill.
- Gem**—chick waterer—Hoeft & Co., North Chicago, Ill.
- Germaco**—hot k a p s—Germain's Seed & Plant Co., Los Angeles, Calif.
- Gold Leaf**—tobacco powder—Tobacco By-Products & Chemical Corp., Louisville, Ky.
- Grape Dust**—fungicide—Hammond Paint & Chemical Co., Beacon, N. Y.
- Grasselli**—spray products—Grasselli Chemical Co., Cleveland, Ohio.
- Grip-Lock**—bag seal—E. J. Brooks Co., Newark, N. J.
- Growmore**—chick feed—The Ackerman Company, Lima, Ohio.
- Grub-O**—lawn grub proofing compound—Andrew Wilson, Inc., Springfield, N. J.
- Hammond's**—insecticides, fungicides, paints and putties—Hammond Paint & Chemical Co., Beacon, N. Y.
- Hammond's Copper Solution**—fungicide—Hammond Paint & Chemical Co., Beacon, N. Y.
- Heco**—envelopes—Heco Envelope Co., Chicago, Ill.
- Henry Troemner**—weighing apparatus—Henry Troemner, Philadelphia, Pa.
- Herbst**—bag cleaners—S. Howes Co., Silver Creek, N. Y.
- Hole-In-One**—bulb planter—Straw Products Co., Philadelphia, Pa.
- Horicum Lime**—sulphur concentrate and fungicide—Hammond Paint & Chemical Co., Beacon, N. Y.
- Howes**—equipment for seed houses—S. Howes Co., Silver Creek, N. Y.
- H. W. K.**—weed killer—Hammond Paint & Chemical Co., Beacon, N. Y.
- Hydro-Air**—power sprayer—Andrew Wilson, Inc., Springfield, N. J.
- Ilco**—poultry bands and supplies—Illinois Supply Co., Aurora, Ill.
- Imperial**—baked animal foods—Imperial Biscuit Co., Sackets Harbor, N. Y.
- Imperial**—lawn edger—Imperial Bit & Snap Co., Racine, Wis.
- Invincible**—bean polishers and bean cleaning and grading equipment—S. Howes Co., Silver Creek, N. Y.
- Iron Age**—garden tools—Ellis Keystone Agricultural Works, Pottstown, Pa.
- Kerosene Emulsion**—insecticide—Hammond Paint & Chemical Co., Beacon, N. Y.
- Keystone**—circular wood saws and fodder cutters—Ellis Keystone Agricultural Works, Pottstown, Pa.
- Kleenup Oil**—for control of scale, red mite and leaf roller—Grasselli Chemical Co., Cleveland, Ohio.
- Kreme Skin**—garden gloves—National Glove Co., Columbus, Ohio.
- Lambert's Death to Lice**—powder for poultry—The Klein-Lambert Co., Blue Island, Ill.
- Laymore**—poultry feed—The Ackerman Co., Lima, Ohio.
- Life Saver Systems**—hot water heating systems for brooder houses and laying houses—Illinois Supply Co., Aurora, Ill.
- Lilly's**—fertilizers and dairy feeds—Chas. H. Lilly Co., Seattle, Wash.
- Lite-O-Glas**—artificial glass—Fleming Bros., Chicago, Ill.
- Little Giant**—mole traps—Michigan Wire Goods Co., Niles, Mich.
- Lyric**—mixed bird seed—Philadelphia Seed Co., Philadelphia, Pa.
- Mainstay**—cotton twine for closing bags by hand sewing—Bemis Bro. Bag Co., St. Louis, Mo.
- Manganar Rose Dust**—fungicide—Grasselli Chemical Co., Cleveland, Ohio.
- Master**—ant killer—Jones Products Co., Chicago, Ill.
- McQueen's**—inoculator—McQueen Bacteria Co., Baltic, Ohio.
- Miller's**—dog food and supplies, bird food and fish food—Battle Creek Dog Food Co., Battle Creek, Mich.
- Mix**—bean sorters—S. Howes Co., Silver Creek, N. Y.
- Moe's Line**—poultry supplies and garden tools, fertilizer spreader and seeder—Hoeft & Co., Inc., North Chicago, Ill.
- Montania**—seed packeting machine—J. M. Lehmann Co., Inc., New York, N. Y.
- Morecorn**—seed corn sorters and graders—Universal Hoist & Mfg. Co., Cedar Falls, Iowa.
- Mt. Beacon**—green shading—Hammond Paint & Chemical Co., Beacon, N. Y.
- Napa Goat**—garden gloves—National Glove Co., Columbus, Ohio.
- Napa Horse**—garden gloves—National Glove Co., Columbus, Ohio.
- Napa Knit**—garden gloves—National Glove Co., Columbus, Ohio.
- Need Envelopes? Phone Heco!**—Hecc Envelope Co., Chicago, Ill.
- Neponset**—flower pots, flower pot covers and earth bands—Bird & Son, Inc., East Walpole, Mass.
- Nico-Fume**—liquid, paper and powder insecticide—Tobacco By-Products & Chemical Corp., Louisville, Ky.
- Nicotine Soap**—insecticide—Hammond Paint & Chemical Co., Beacon, N. Y.
- Nikoteen**—liquid, powder aphid punk—Nicotine Mfg. Co., St. Louis, Mo.
- Nitragin**—soil and legume inoculator—The Nitragin Co., Inc., Milwaukee, Wis.
- Norcross**—garden and lawn tools—C. S. Norcross & Sons, Bushnell, Ill.
- O. K.**—plant spray—Andrew Wilson, Inc., Springfield, N. J.
- Old English Lawn Klenser**—Japanese beetle exterminator—Philadelphia Seed Co., Philadelphia, Pa.
- Old English**—liquid putty—Hammond Paint & Chemical Co., Beacon, N. Y.
- Old English**—sheep manure—Philadelphia Seed Co., Philadelphia, Pa.
- Old English**—turf builder and plant food—Philadelphia Seed Co., Philadelphia, Pa.
- Original**—greenhouse white paint—Hammond Paint & Chem. Co., Beacon, N. Y.
- Ortho**—pest control and weed killer—Cal. Spray Chem. Corp., Berkeley, Cal.
- Out-U-Kum**—weed puller—C. S. Norcross & Sons, Bushnell, Ill.

- Patch**—budder—Walter E. Clark & Son, Milford, Conn.
- P D Q**—seed catalog envelopes—Gaw-O'Hara Envelope Co., Chicago, Ill.
- Peerless**—gunning asbestos asphaltum—Hammond Paint & Chemical Co., Beacon, N. Y.
- Perfection Coliverol**—powdered cod liver oil—Perfection Foods Co., Battle Creek, Mich.
- Perfection**—dog and fox food—Perfection Foods Co., Battle Creek, Mich.
- Perma Marker**—permanent marker for stakes and labels—Yoho & Hooker, Youngstown, Ohio.
- Pest-Kit**—kit containing material to combat insects and diseases—Hammond Paint & Chemical Co., Beacon, N. Y.
- Porter**—bag seals—Porter Safety Seal Co., Chicago, Ill.
- Purgrain**—pigeon, poultry and rabbit feeds and pigeon health grit—Philadelphia Seed Co., Philadelphia, Pa.
- Pyrote**—non poisonous double acting insecticide—Mechling Bros. Chemical Co., Camden, N. J.
- Racine**—fanning mill type seed cleaners—S. Howes Co., Silver Creek, N. Y.
- Reddick**—mole trap—Michigan Wire Goods Co., Niles, Mich.
- Red Ring Brand Nikoteen**—insecticide—Nicotine Mfg. Co., St. Louis, Mo.
- Red Ring Brand Nikoteen-Aphis Punk**—nicotine paper fumigant—Nicotine Mfg. Co., St. Louis, Mo.
- Red Ring Brand Nikoteen Powder**—Nicotine Mfg. Co., St. Louis, Mo.
- Rhodono**—plant food—Garfield Williamson, New York, N. Y.
- Rhody-Life**—Andrew Wilson, Inc., Springfield, N. J.
- Rid-O-rat**—non poisonous liquid rat exterminator—Andrew Wilson, Inc., Springfield, N. J.
- Rival**—poultry feeds—Chesmore Seed Co., St. Joseph, Mo.
- Root Quality**—bee supplies—A. I. Root Co., Medina, Ohio.
- Rose Dust**—fungicide—Hammond Paint & Chemical Co., Beacon, N. Y.
- Rotofume**—liquid Rotenone insecticide—Andrew Wilson, Inc., Springfield, N. J.
- St. Andreasberg**—bird supplies—St. Louis Seed Co., St. Louis, Mo.
- Scale-O**—dormant spray—Andrew Wilson, Inc., Springfield, N. J.
- Screen-It**—shrub protector—Straw Products Co., Philadelphia, Pa.
- Seal Brand**—seed packets and bags—Disbrow Mfg. Co., Newark, N. J.
- Seals That Seal**—seals—Porter Safety Seal Co., Chicago, Ill.
- Seedburo Quality**—grain, seed and flour grading equipment—Seed Trade Reporting Bureau, Chicago, Ill.
- Self-Serve**—seed packet display racks—Davis Metal Fixture Co., Lansing, Mich.
- Sheps**—concentrated cattle spray, fly killer and plant spray—Shepard Laboratories, Council Bluffs, Iowa.
- Sheep's Head Brand**—sheep and cattle manure and fertilizer—Natural Guano Co., Aurora, Ill.
- Sho-Gro**—seed germinators—Seed Trade Reporting Bureau, Chicago, Ill.
- Sholder**—scoop—Michigan Wire Goods Co., Niles, Mich.
- Slug Shot**—insecticide and fungicide—Hammond Paint & Chemical Co., Beacon, N. Y.
- Soil-O-Gas**—soil fumigant—Andrew Wilson, Inc., Springfield, N. J.
- Specific**—gravity separators, cleaners and graders—Sutton, Steele & Steele, Dallas, Texas.
- Sterling**—feeds—Northrup, King & Co., Minneapolis, Minn.
- Stimugerm**—jelly and humus seed inoculator—Stimuplant Laboratories, Inc., Long Island City, N. Y.
- Stimuplant**—plant food—Stimuplant Laboratories, Inc., Long Island City, N. Y.
- Storm King**—greenhouse white paint and white glazing compound—Hammond Paint & Chemical Co., Beacon, N. Y.
- Straw**—bird houses—Straw Products Co., Philadelphia, Pa.
- Sulfuron**—fungicide—Grasselli Chemical Co., Cleveland, Ohio.
- Superior**—lawn edge trimmer—Superior Metal Spinning & Mfg. Co., Toledo, Ohio.
- Sure Shot**—concentrated pyrethrum soap spray—Hammond Paint & Chemical Co., Beacon, N. Y.
- Terogen**—soil disinfectant and fertilizer—Rose Mfg. Co., Philadelphia, Pa.
- Tetrafume**—rat exterminator—Douglas Chemical & Supply Co., Kansas City, Mo.
- The Best for Less**—poultry and pigeon supplies—Illinois Supply Co., Aurora, Ill.
- Thrip Juice**—insecticide—Hammond Paint & Chemical Co., Beacon, N. Y.
- Tite Lock Seal**—seal poultry leg bands—Illinois Supply Co., Aurora, Ill.
- Trowbridge**—grafting wax—Walter E. Clark & Son, Milford, Conn.
- True to Type**—seed pockets—Stecher Lithographic Co., Rochester, N. Y.
- Tri-Tox-Cide**—thrips dust insecticide—Andrew Wilson, Inc., Springfield, N. J.
- Visinet**—bags for fruit and vegetables—Bemis Bro. Bag Co., St. Louis, Mo.
- Wilson's**—dusting sulphur, lawn fertilizer, liquid insecticide soap, summer fruit fungicide, weed killer, tree wound paint, worm eradicator dust, high pressure spray hose, tree food, superbilt fertilizer distributor, estate power sprayer, dust gun—Andrew Wilson, Inc., Springfield, N. J.
- Windobag**—seed enclosure—I. L. Radwaner Seed Co., New York, N. Y.
- Wizard**—sheep and cattle manure—Pulverized Manure Co., Chicago, Ill.
- Woodco**—lawn food—F. H. Woodruff & Sons, Milford, Conn.

Use the  
**TRADE MARK SECTION**  
 Starting Page 40—For Leading Trade Marks  
 and Brands Used by the Seedsmen and  
 Manufacturers of Allied Lines

## DIRECTORY SECTION

On the following pages are given the names and addresses of seed growers and wholesalers of both field and garden seeds. For manufacturers of store and warehouse supplies and merchandise for resale purposes, etc., see pages 102 and 146.

By this method of classification it is easy to locate the growers or wholesalers in any particular state or section of the country and the manufacturer or distributor of anything used by the seed dealer in the conduct of his own business or sold to his patrons.

Every effort has been made, in compiling this directory, to make it as complete as possible. The names and the lines handled were supplied by the firms listed in response to a general invitation to the trade.

The publication of this book has been made possible by the support and co-operation of the firms listed in bold face type and whose advertising appears on the pages as indicated by the numbers following their names.

**In cases where firms specialize in the handling of a certain item this fact is indicated by the commodity appearing in parenthesis after the company's name.**

### WHOLESALE FIELD SEEDS

#### ALABAMA

Barber Brothers Seed Co.  
Birmingham, Ala.  
Birmingham Seed Co.  
Birmingham, Ala.  
Poyner Seed Co.  
Dothan, Ala.  
North Alabama Seed Co.  
Florence, Ala.  
Wind & Co., I.  
Huntsville, Ala.  
Van Antwerp Seed Co.  
Mobile, Ala.

#### ARIZONA

Buckeye Seed & Feed Co.  
Buckeye, Ariz.  
Pinal Feed & Fuel Co.  
Florence, Ariz.  
Johnson-Pearce Co.  
Mesa, Ariz.  
Arizona Feed & Seed Association  
Phoenix, Ariz.  
**Capital Fuel & Feed Co.**  
**Phoenix, Ariz.**  
Liefgreen Seed Co.  
Phoenix, Ariz.  
Quick Seed & Feed Co.  
Phoenix, Ariz.  
Langers Seed & Floral Co.  
Tucson, Ariz.  
Alfalfa Seed Co.  
Yuma, Ariz.  
Blalack & Whitman  
Yuma, Ariz.  
Sanguinetti, E. F.  
Yuma, Ariz.  
**Yuma County Farm Bureau Marketing Association**  
**Yuma, Ariz.**  
(See Adv. on Page 49)

#### ARKANSAS

Arkoma Grain Co.  
Fort Smith, Ark.  
Fort Smith Seed Co., Inc.  
Fort Smith, Ark.

#### CALIFORNIA

Bomberger Seed Co.  
Berkeley, Calif.  
Aggeler & Musser Seed Co.  
Los Angeles, Calif.  
**Germain Seed & Plant Co.**  
**Los Angeles, Calif.**  
(See Adv. on Page 145)  
Smith & Co., F. F.  
Sacramento, Calif.  
**Ferry-Morse Seed Co.**  
**San Francisco, Calif.**  
(See Adv. on Page 70)  
Sevin-Vincent Seed Co.  
San Francisco, Calif.  
Volkman & Co., C. M.  
San Francisco, Calif.  
**Knox Seed Co.**  
**Stockton, Calif.**  
(See Adv. on Opposite Page)

#### CANADA

McKenzie Co., Ltd., A. E.  
Brandon, Man., Canada.  
Hunter & Co., A. S.  
Durham, Ont., Canada  
Bruce & Co., Ltd., John A.  
Hamilton, Ont., Canada.  
Hogg & Lytle, Ltd.  
Oakwood, Ont., Canada.  
McDonald & Sons, Ltd., Kenneth  
Ottawa, Ont., Canada.  
Ewing, The Wm. Co., Ltd.  
Montreal, Que., Canada.  
Canada Seed Co., Ltd., The  
Toronto, Ont., Canada.  
Goodall, Ltd., James  
Toronto, Canada.  
Keith & Sons, Geo.  
Toronto, Canada.  
Rennie Seeds, Wm., Ltd.  
Toronto, Canada.  
**Steele, Briggs Seed Co., Ltd.**  
**Toronto, Canada**  
(See Adv. on Page 26)

#### COLORADO

Barteldes Seed Co.  
Denver, Colo.  
Rocky Mountain Seed Co.  
Denver, Colo.  
Western Seed Co.  
Denver, Colo.  
**Grand Junction Seed Co.**  
**Grand Junction, Colo.**  
(See Adv. on Page 39)  
Strain Bros.  
Lamar, Colo.  
James, R. H.  
Rocky Ford, Colo.

#### CONNECTICUT

Cadwell & Jones  
Hartford, Conn.  
**Woodruff & Sons, F. H.**  
**Milford, Conn.**  
(See Adv. on Page 7)  
Platt Co., Inc., The Frank S.  
New Haven, Conn.  
**Comstock, Ferre & Co.**  
**Wethersfield, Conn.**  
(See Adv. on Page 31)

#### GEORGIA

Cofer & Co., H. L.  
Athens, Ga.  
Snelson Seed Co.  
Athens, Ga.  
Everett Seed Co.  
Atlanta, Ga.  
Walton Seed Co. (Cowpeas and Soybeans)  
Augusta, Ga.  
Rhodes Seed Co. (Cowpeas)  
Forsyth, Ga.  
Settle & Robison (Cowpeas)  
Jackson, Ga.  
Curry-Arrington Co.  
Rome, Ga.

# California Grown

Melilotus Indica  
Burr Clover  
Sunflower  
Alfalfa  
Beans

**KNOX SEED CO.**  
Stockton, Calif.

## W. H. CROSSLAND

General Sales Representative

Exclusive Distributing Agent for  
BLACKFOOT BRAND ALFALFA

A Full and Diversified  
list of FARM and  
GRASS SEEDS  
Drawn from a broad  
territory gives you a  
selection of real values.

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and prices.

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**MILWAUKEE**

Phone: Lakeside 4980

## Jenks White Seed Company

Wholesale Field Seeds

SALEM, OREGON

Albany

Portland

Redmond

### SPECIALTIES

Oregon Ryegrass  
Spring Vetch (*vicia sativa*)  
Hungarian Vetch (*vicia pannonica*)  
Winter Vetch (*vicia villosa*)  
Mesquite Seed (*holcus lanatus*)  
Reed Canary (*Philaris arundinacea*)

Seaside Bent (*Agrotis maratima*)  
Tangier Peas  
Austrian Peas  
Harding Grass  
Timothy  
White Clover  
Perennial English Ryegrass

Astoria Bent  
Alsike Clover  
Red Clover  
Mammoth Clover  
Ladino Clover



**PAGE'S**

Standard  
Quality

**SEEDS**

VEGETABLE AND FLOWERS  
SEED CORN—OATS—MILLET

Wholesale

**THE PAGE SEED CO., GREENE, N. Y.**



## WHOLESALE FIELD SEEDS—Continued

## IDAHO

Idaho Grimm Alfalfa Seed Growers Assn.  
 Blackfoot, Idaho  
 (See Adv. on Page 7)  
 Central Coal & Seed Co.  
 Boise, Idaho  
 Union Seed & Fuel Co.  
 Boise, Idaho  
 Buhl Seed & Grain Co.  
 Buhl, Idaho  
 Pioneer Seed & Grain Co.  
 Burley, Idaho  
 Duthie Co.  
 Lewiston, Idaho  
 Means Co., Mark  
 Lewiston, Idaho

## ILLINOIS

Funk Bros. Seed Co.  
 Bloomington, Ill.  
 Vollbracht Co., Wm.  
 Camp Point, Ill.  
 Dickinson Co., Albert  
 Chicago, Ill.  
 Hales & Hunter Co.  
 Chicago, Ill.  
 Johnson, Inc., J. Oliver  
 Chicago, Ill.  
 Sun-Field Seed Service  
 Chicago, Ill.  
 Maulding & Co., C. A.—(Redtop)  
 Dahlgren, Ill.  
 Shellabarger Grain Products Co.  
 Decatur, Ill.  
 Schultz, J. M.  
 Dieterich, Ill.  
 Keith & Son, L. J.—(Redtop)  
 Fairfield, Ill.  
 Poorman & Co., A. J.  
 Fairfield, Ill.  
 Egyptian Seed Growers Exchange—  
 (Redtop)  
 Flora, Ill.  
 Noble Bros.  
 Gibson City, Ill.  
 Morris Grain & Seed Co.  
 Morris, Ill.  
 Olney Seed & Feed Store  
 Olney, Ill.  
 Shultz Seed Co.  
 Olney, Ill.  
 K. & A. Seed Co.  
 Peoria, Ill.  
 Kelly Seed Co.  
 Peoria, Ill.  
 Eber Seed Co.  
 Quincy, Ill.  
 Keller & Sons, Geo.  
 Quincy, Ill.  
 Quincy Seed Co.  
 Quincy, Ill.  
 Condon Bros. Seedsmen  
 Rockford, Ill.  
 Wayne City Seed Co.—(Redtop and Sun-  
 flower)  
 Wayne City, Ill.

## INDIANA

Crabbs, Reynolds, Taylor Co.  
 Crawfordsville, Ind.  
 Crawfordsville Seed Co.  
 Crawfordsville, Ind.  
 Heldt Co., The  
 Evansville, Ind.

McCarty Co., The J. A.  
 Evansville, Ind.  
 Ohio Valley Seed Co.  
 Evansville, Ind.  
 K. & A. Seed Co., Inc.  
 Fort Wayne, Ind.  
 Hooton-Davis Seed Co.  
 Lebanon, Ind.  
 Wertheimer & Sons, N.  
 Ligonier, Ind.  
 Scott Seed Co.  
 New Albany, Ind.  
 Meyer Grain Co.  
 South Whitley, Ind.  
 Goodrich Bros. Co.  
 Winchester, Ind.

## IOWA

Hamilton Seed & Coal Co.  
 Cedar Rapids, Iowa  
 (See Adv. on Page 47)  
 Council Bluffs Seed Co. (Seed Corn)  
 Council Bluffs, Iowa  
 Ouren Seed Co.  
 Council Bluffs, Iowa  
 (See Adv. on Page 25)  
 Younkerman Seed Co.  
 Council Bluffs, Iowa  
 Davenport Seed Co.  
 Davenport, Iowa  
 (See Adv. on Page 17)  
 Standard Seed Co.  
 Des Moines, Iowa  
 Northwestern Seed Co.  
 Keokuk, Iowa  
 Nishna Valley Seed Co. (Seed Corn)  
 Shenandoah, Iowa  
 Sioux City Seed Co.  
 Sioux City, Iowa  
 Wertz Seed Co.  
 Sioux City, Iowa

## KANSAS

Assaria Hardware Co.  
 Assaria, Kan.  
 (See Adv. on Page 27)  
 Mangelsdorf & Co., F. A.  
 Atchison, Kan.  
 Mangelsdorf Seed Co.  
 Atchison, Kan.  
 Adam Merc. Co., L. C. (Car Lots)  
 Cedar Vale, Kan.  
 Bowman Seed Co.  
 Concordia, Kan.  
 Barteldes Seed Co.  
 Lawrence, Kan.  
 Kansas Seed Co.  
 Salina, Kan.  
 McCullough Co., Mack  
 Salina, Kan.  
 Salina Produce Co.  
 Salina, Kan.  
 Sedgwick Alfalfa Mills  
 Sedgwick, Kan.  
 Coe Seed & Grain Co., D. O.  
 Topeka, Kan.  
 Ross Bros. Seed Co.  
 Wichita, Kan.

## KENTUCKY

Brent Seed Co., The C. S.  
 Lexington, Ky.  
 Lexington Seed Co.  
 Lexington, Ky.  
 Bunton Seed Co.  
 Louisville, Ky.

**Patronize those who made it possible to publish  
 this Directory.**

**See Advertisers' Index on page 164**

# FIELD SEEDS

REDTOP; ORCHARD AND  
KENTUCKY BLUE GRASS;  
ALL CLOVERS; TIMOTHY;  
MILLET; SOY BEANS; ETC.  
LAWN GRASS SEED;  
SEED MIXTURES

*Inquiries Appreciated*

## LOUISVILLE SEED C O M P A N Y

226 NORTH 15th. ST. LOUISVILLE, KY.

## Hamilton Seed and Coal Co.

Cedar Rapids, Iowa



*Wholesale Dealers*

**TIMOTHY-ALSIKE-RED CLOVER-ALFALFA**

## OREGON GROWN GRASS SEEDS

RYE GRASS  
CLOVERS

VETCHES  
BENT GRASS

REED'S CANARY GRASS  
PEAS

◀ CAR LOTS OR LESS ▶

*Write or Wire for Prices and Samples*

**A. M. HAND SEED CO., INC., Portland, Ore.**

## WHOLESALE FIELD SEEDS—Continued

Chambers Seed Co.  
Louisville, Ky.  
Hall Seed Co.  
Louisville, Ky.  
Hardin & Lewman  
Louisville, Ky.  
Lewis Implement & Seed Co.  
Louisville, Ky.  
**Louisville Seed Co.**  
Louisville, Ky.  
(See Adv. on Page 47)  
Orchard Grass Seed Co-op. (Orchard Grass)  
Louisville, Ky.  
National Seed Co.  
Louisville, Ky.  
Ross Seed Co.  
Louisville, Ky.  
Watts & Son, John R.  
Louisville, Ky.  
Korean Seed Growers Association  
Morganfield, Ky.  
Yopp Seed Co.  
Paducah, Ky.  
Brent & Co., Inc.  
Paris, Ky.  
Spears & Sons, Woodford  
Paris, Ky.  
Spears-Kiser Co.  
Paris, Ky.  
Wilson, Jas. S.  
Paris, Ky.  
Mahan Co.  
Winchester, Ky.

**LOUISIANA**

Gulf States Seed Co.  
Alexandria, La.  
**Beridon, Jr., E. J.**  
Hamburg, La.  
(See Adv. on Page 17)  
Bacque Seed Co.  
Lafayette, La.  
**Coco, Leon (White Clover)**  
Moreauville, La.  
Reuter Seed Co., Inc.  
New Orleans, La.

**MARYLAND**

Belt Seed Co.  
Baltimore, Md.  
**Blamberg Bros., Inc.**  
Baltimore, Md.  
(See Adv. on Page 59)  
Richardson & Co., E. Miller  
Baltimore, Md.  
Scarlett & Co., Wm. G.  
Baltimore, Md.

**MASSACHUSETTS**

Breck & Sons Corp., Jos.  
Boston, Mass.  
Dickinson Co., The Albert  
Boston, Mass.  
Emerson Co., Thos. W.  
Boston, Mass.  
Ross Bros. Co.  
Worcester, Mass.

**MICHIGAN**

**King & Sons, H. C.**  
Battle Creek, Mich.  
(See Adv. on Page 15)  
**Brown Seed Co., Alfred J.**  
Grand Rapids, Mich.  
(See Adv. on Page 1)  
**Isbell Seed Co.**  
Jackson, Mich.  
(See Adv. on Page 59)  
McLaughlin Ward & Co.  
Jackson, Mich.

**MINNESOTA**

Lyman, Inc., A. B. (Grimm Alfalfa)  
Excelsior, Minn.  
Farmer Seed & Nursery Co.  
Faribault, Minn.  
Dickinson Co., The Albert  
Minneapolis, Minn.

**Minneapolis Seed Co.**  
Minneapolis, Minn.  
(See Adv. on Page 17)  
**Northrup, King & Co.**  
Minneapolis, Minn.  
(See Adv. on Page 21)  
Stuhr-Seidl Co.—(Seed Oats)  
Minneapolis, Minn.  
Moorhead Farmers Elevator Co.  
Moorhead, Minn.  
Olsen Co., N. J.  
Moorhead, Minn.  
Simmons, D. D.  
Moorehead, Minn.  
Cashman Seed Co.  
Owatonna, Minn.  
Thief River Falls Seed House  
Thief River Falls, Minn.  
Peterson-Biddick Co.  
Wadena, Minn.  
Northern Field Seed Co.  
Winona, Minn.

**MISSISSIPPI**

Rose Seed Co.  
Clarksdale, Miss.  
Pace Seed & Supply Co.  
Cleveland, Miss.  
Vicksburg Seed Co.  
Vicksburg, Miss.  
Williams Co., P. P.  
Vicksburg, Miss.

**MISSOURI**

Eagle Mill & Elev. Co.  
Higginsville, Mo.  
**Bagnall, Howard E.**  
Kansas City, Mo.  
Peppard Seed Co., J. G.  
Kansas City, Mo.  
Rudy-Patrick Seed Co.  
Kansas City, Mo.  
Tobin Seed Co.  
Kansas City, Mo.  
Maupin Seed Co.  
King City, Mo.  
**Chesmore Seed Co.**  
St. Joseph, Mo.  
(See Adv. on Page 71)  
**Kellogg-Kelly Seed Co.**  
St. Joseph, Mo.  
(See Adv. on Page 49)  
Mitchellhill Seed Co.  
St. Joseph, Mo.  
**Corneli Seed Co.**  
St. Louis, Mo.  
(See Adv. on Page 17)  
**Mangelsdorf & Bro., Ed. F.**  
St. Louis, Mo.  
(See Adv. on Page 15)  
Prunty Seed & Grain Co.  
St. Louis, Mo.  
**St. Louis Seed Co.**  
St. Louis, Mo.  
(See Adv. on Page 59)  
Springfield Seed Co.  
Springfield, Mo.  
Wood-Beazley Seed Co.  
Springfield, Mo.

**MONTANA**

Northern Montana Alfalfa Growers' Assn.  
Glasgow, Mont.  
Barkemeyer Seed Co.  
Great Falls, Mont.  
State Nursery & Seed Co.  
Helena, Mont.  
Lakin Seed Co. (Alfalfa)  
Miles City, Mont.  
Snell Bros. (Grimm Alfalfa)  
Miles City, Mont.  
Northland Seed Co.  
Sidney, Mont.

**NEBRASKA**

Pease Grain & Seed Co.  
Beatrice, Neb.

## Kellogg-Kelly Seed Co.

*Specialists in*

Missouri Grown — Kentucky

# Blue Grass

*of higher quality*

We do our own

Harvesting  
Threshing  
Cleaning

*Samples and prices on request*

**St. Joseph, Missouri**

## Wholesale Dealers in Alfalfa Seed

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Common  
Hairy Peruvian  
Smooth Peruvian

---

Bermuda Grass

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Sesbania

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Car Lots or less

*Write or Wire for Samples and Prices*

**YUMA COUNTY FARM  
BUREAU MARKETING ASS'N.**  
YUMA ARIZONA

Established 1923

# ALFALFA

● VERIFIED ORIGIN

NEBRASKA — DAKOTA 12 CERTIFIED GRIMM  
SOUTH DAKOTA GROWN

SWEET CLOVER :: SUDAN :: CANE :: MILLET

*CAR LOTS OR LESS*

**GRISWOLD SEED & NURSERY CO.**  
LINCOLN, NEBRASKA

# FIELD SEEDS

Car lot shippers of high grade Kentucky Bluegrass,  
Sweet Clover, Alfalfa, Sudan and all other Field Seeds

**THE NEBRASKA SEED CO.**  
OMAHA, NEBRASKA

## WHOLESALE FIELD SEEDS—Continued

Sonderegger Seed & Nursery House  
Beatrice, Neb.  
Bonahoom Seed Co.  
Hastings, Neb.

**Griswold Seed & Nursery Co.**  
Lincoln, Neb.  
(See Adv. on Page 49)

K. & A. Seed Co.  
Omaha, Neb.

**Nebraska Seed Co.**  
Omaha, Neb.  
(See Adv. on Page 49)

Campbell, Henry  
Seward, Neb.

**NEW HAMPSHIRE**  
Varick Co., Jno. B.  
Manchester, N. H.

**NEW JERSEY**  
Doughten Seed Co., The  
Jersey City, N. J.

**NEW MEXICO**  
Patterson Seed Co.  
Clovis, N. Mex.  
Mitchell, E. W.  
Roswell, N. Mex.

**NEW YORK**  
Smith-Conklin Co.  
Binghamton, N. Y.  
Daniels Seed Co.  
Buffalo, N. Y.  
Dickinson Co., The Albert  
Buffalo, N. Y.  
Harvey Seed Co.  
Buffalo, N. Y.  
Stanford Seed Co.  
Buffalo, N. Y.  
Whitney-Eckstein Seed Co.  
Buffalo, N. Y.  
Whitney-Noyes Co.  
Buffalo, N. Y.  
Pierpont & Smith  
Cassadaga, N. Y.  
Forrest Seed Co., Inc.  
Cortland, N. Y.  
**Page Seed Co.**  
Greene, N. Y.  
(See Adv. on Page 45)  
Amtorg Trading Corporation  
New York, N. Y.  
**Duryea Seed Co., Inc.**  
New York, N. Y.  
(See Adv. on Page 32)  
McHutchison & Co.  
New York, N. Y.  
**Radwaner Seed Co., I. L.**  
New York, N. Y.  
(See Adv. on Pages 63 and 81)  
Stumpp & Walter Co.  
New York, N. Y.  
**Williamson, Garfield**  
New York, N. Y.  
(See Adv. on Page 60)  
Gardner Seed Co.  
Rochester, N. Y.

**NORTH CAROLINA**  
Asheville Seed Co.  
Asheville, N. C.  
Buxton White Seed Co.  
Elizabeth City, N. C.  
Catawba Seed Store  
Hickory, N. C.  
Farmers Supply House  
New Bern, N. C.  
Wyatt & Sons Co., Job P.  
Raleigh, N. C.  
Rowan Pure Seed Mutual Exchange, Inc.  
Salisbury, N. C.

Blount-Midyette & Co., Inc. (Soybeans)  
Washington, N. C.  
Roudabush's Seed Store  
Wilmington, N. C.  
**Woodleaf Certified Seed Ass'n, Inc.**  
Woodleaf, N. C.  
(See Adv. on Page 25)

**NORTH DAKOTA**  
Will & Co., Oscar H.  
Bismarck, N. D.  
Goldberg Seed & Feed Co.  
Fargo, N. D.  
Interstate Seed & Grain Co.  
Fargo, N. D.  
Magill & Co. (Operating Fargo Seed House)  
Fargo, N. D.  
**Newday Seeds, Inc. (Sweet Clover)**  
Fargo, N. D.  
Grand Forks Seed Co.  
Grand Forks, N. D.  
Aney Seed & Nursery Co., Roy  
Minot, N. D.  
Valker-Christensen Co.  
Minot, N. D.

**OHIO**  
Healy Seed Co.  
Belle Center, Ohio  
Holmes Seed Co., The  
Canton, Ohio  
Haile & Sons, J. C.  
Cincinnati, Ohio  
**Market Gardeners' Seed Co.**  
Cincinnati, Ohio  
(See Adv. on Page 15)  
**McCullough Seed Co., The J. Chas.**  
Cincinnati, Ohio  
(See Adv. on Page 15)  
**McCullough's Sons Co., The J. M.**  
Cincinnati, Ohio  
(See Adv. on Page 27)  
Seaside Bent Co.  
Cincinnati, Ohio  
Botzum Bros. Seed Co.  
Cleveland, Ohio  
Livingston Seed Co.  
Columbus, Ohio  
Hoyt Co., The A. C.  
Fostoria, Ohio  
O. & M. Seed Co. (Seed Oats and Seed Corn)  
Green Springs, Ohio  
Eikenberry Bros. Co.  
Hamilton, Ohio  
**Ackerman Company**  
Lima, Ohio  
(See Adv. on Page 27)  
**Scott & Sons Co., O. M.**  
Marysville, Ohio  
(See Adv. on Page 39)  
Sneath-Cunningham Co.  
Tiffin, Ohio  
Flower Co. & Co., S. W.  
Toledo, Ohio  
Hirsch & Sons, Henry  
Toledo, Ohio

**OKLAHOMA**  
Oklahoma Improved Seed Co.  
Chickasha, Okla.  
Muskogee Seed House  
Muskogee, Okla.  
Clarke & Keller Seed Store  
Shawnee, Okla.  
Binding-Stevens Seed Co.  
Tulsa, Okla.

**OREGON**  
Senders & Co., M.  
Albany, Ore.  
Engbretson Seed Co. (Bent Grass)  
Astoria, Ore.

## MORE THAN 40 MILLION BUYERS

of seeds, plants, bulbs, nursery stock, pets and pet supplies, poultry supplies and various accessories, are patrons of SEED WORLD readers.

## WHOLESALE FIELD SEEDS—Continued

O'Neil, G. L.  
Grants Pass, Ore.  
Hershberger, Lee L.  
Hubbard, Ore.  
Coos County Bent Seed Co. (Bent Grass)  
Marshfield, Ore.  
**Hand Seed Co., Inc., A. M.**  
**Portland, Ore.**  
(See Adv. on Page 47)  
**Lilly Co., The Chas. H.**  
**Portland, Ore.**  
(See Adv. on Page 80)  
North Coast Seed Co.  
Portland, Ore.  
Portland Seed Co.,  
Portland, Ore.  
**Jenks White Seed Co.**  
**Salem, Ore.**  
(See Adv. on Page 45)

**PENNSYLVANIA**

Schell, Inc., Walter S.  
Harrisburg, Pa.  
Reist Seed Co.  
Lancaster, Pa.  
Hoffman, Inc., A. H.  
Landisville, Pa.  
Atlantic Seed Co.  
Philadelphia, Pa.  
**Philadelphia Seed Co. (Fancy Grasses)**  
**Philadelphia, Pa.**  
(See Adv. on Page 20)  
**Seaboard Seed Co.**  
**Philadelphia, Pa.**  
Dickinson Co., The Albert  
Pittsburgh, Pa.  
Rohrer & Bro., P. L.  
Smoketown, Pa.

**SOUTH CAROLINA**

Mixson Seed Co., W. H.  
Charleston, S. C.  
Kirkland Seed Co., B. B.  
Columbia, S. C.

**SOUTH DAKOTA**

Sexauer & Son, George P.  
Brookings, S. D.  
Dakota Improved Seed Co.  
Mitchell, S. D.  
Haley-Neeley Co.  
Sioux Falls, S. D.

**TENNESSEE**

Central Basin Seed Co.  
Fayetteville, Tenn.  
English & Sons, W. H.  
Franklin, Tenn.  
Fleming, S. M.  
Franklin, Tenn.  
Bryant Brothers  
Humboldt, Tenn.  
Hackney, Kearns & Lackey  
Knoxville, Tenn.  
Mayo, D. R.  
Knoxville, Tenn.  
Cook, L. P.  
Memphis, Tenn.  
Russell-Heckle Seed Co.  
Memphis, Tenn.  
Dobson-Hicks Co.  
Nashville, Tenn.  
McKay-Reece Co.  
Nashville, Tenn.  
Tennessee Lespedeza Growers, Inc.  
(Lespedeza)  
Nashville, Tenn.

**TEXAS**

Kearns Grain & Seed Co., Inc.  
Amarillo, Texas  
Magnolia Seed Co.  
Dallas, Texas  
Nicholson Seed Co., Robert  
Dallas, Texas  
Cone Grain & Seed Co., S. E.  
Lubbock, Texas

Ferguson Seed Farms  
Sherman, Texas

**UTAH**

Farr, Thos.  
Ogden, Utah  
Bailey & Sons Co.  
Salt Lake City, Utah  
**Occidental Seed Co.**  
**Salt Lake City, Utah**  
(See Adv. on Page 25)

**VERMONT**

Middlebrook & Sons, J. C.  
Burlington, Vt.  
Burdett Bros.  
Rutland, Vt.

**VIRGINIA**

Bryant's Son, Herbert  
Alexandria, Va.  
Vance Co., Inc.  
Chilhowie, Va.  
Pritchett & Son, Jas. I.  
Danville, Va.  
Smith Seed & Feed Co.  
Danville, Va.  
Jordan Seed & Fertilizer Co.  
Dublin, Va.  
Wetsel Seed Co.  
Harrisonburg, Va.  
Lynchburg Seed Co.  
Lynchburg, Va.  
Charlton-Davis Co.  
Norfolk, Va.  
Grossman & Son, W.  
Petersburg, Va.  
Roper & Co.  
Petersburg, Va.  
Beveridge & Co., S. T.  
Richmond, Va.  
Boehling & Co., F. H.  
Richmond, Va.  
Carter-Venable Co., Inc., The  
Richmond, Va.  
Diggs Seed Co.  
Richmond, Va.  
Wood & Sons, T. W.  
Richmond, Va.  
Roanoke Seed & Supply Co.  
Roanoke, Va.  
Slate Seed Co.  
South Boston, Va.  
Walker Seed Co.  
Winchester, Va.

**WASHINGTON**

**Lilly Co., Chas. H.**  
**Seattle, Wash.**  
(See Adv. on Page 80)  
Northwest Seed Co.  
Seattle, Wash.  
Seaside Bent Seed Co.  
Seattle, Wash.  
Spokane Seed Co.  
Spokane, Wash.

**WISCONSIN**

Knauf & Tesch  
Chilton, Wis.  
Wells Milling Co., A. G.  
Depere, Wis.  
Henry Michels Seed Co.  
Fond du Lac, Wis.  
Olds Seed Co., L. L.  
Madison, Wis.  
Courteen Seed Co.  
Milwaukee, Wis.  
**Crossland, W. H.**  
**Milwaukee, Wis.**  
(See Adv. on Page 45)  
Kellogg Seed Co.  
Milwaukee, Wis.  
North American Seed Co.  
Milwaukee, Wis.  
Teweles Seed Co., L.  
Milwaukee, Wis.  
Cochrane Co., T. H.  
Portage, Wis.

## FOREIGN FIELD SEEDS

### ARGENTINE REPUBLIC

Aron & Destefanis  
Buenos Aires, Argentine  
Bridger & Co.  
Buenos Aires, Argentine  
Crawford, Keen & Co.  
Buenos Aires, Argentine

### AUSTRALIA

Anderson & Co., Ltd., Seedsmen  
Sydney, N. S. W., Australia  
Austraseed Traders, Ltd.  
Sydney, Australia  
Brunnings Pty. Ltd., F. H.  
Melbourne, Australia  
Farmer & Co., Pty., Ltd.  
Melbourne, Australia  
Foster & Sons, Ltd.  
Sydney, Australia  
Gippsland & Northern Co-op Co., Ltd.  
Melbourne, Australia  
Hillsdon Watts, Ltd.  
Mascot, Sydney, Australia  
Law, Somner & Co.  
Melbourne, Australia  
Peterson Bros. & Craig, Ltd.  
Brisbane, Queensland, Australia  
Seccombe, W.  
Coff's Harbour, N. S. W., Australia  
Shepherd & Sons, Ltd.  
Sydney, Australia  
Watter & Son Pty., Ltd.  
Melbourne, Australia  
Yates & Co., Ltd., Arthur  
Sydney, N. S. W., Australia

### AUSTRIA

Gebruder, Boschan  
Vienna, Austria  
Hernfeld, Adolph  
Vienna, Austria  
Bruder Schmeichler  
Vienna, Austria

### BELGIUM

Geens, Francois  
Brussels, Belgium

### CHINA

Manshu Nosan Shokai, Inc.  
Dairen, South Manchuria, China  
(See Adv. on Page 77)

### CZECHO SLOVAKIA

Arnost Bahlsen  
Prague, Czecho Slovakia  
Donat & Schuftan  
Prague, Czecho Slovakia  
Hollander, Jakob  
Kosice, Czecho Slovakia  
Loewenthal Brothers  
Brno, Czecho Slovakia  
Sachsel & Sons, E.  
Prague, Czecho Slovakia  
Schon, Jacob S., Ltd.  
Brno, Czecho Slovakia

### DANZIG

Feldsaat Grosshandels-Vermittelungs  
Nasiona, G. M. B. H., Danzig  
Goldfarb, L. D.  
Danzig  
"Nasiona" Landw. Handelsges, m.b.H.  
Milchkannengasse 25, Danzig  
(See Adv. on Page 87)

### DENMARK

Daehnfeldt, L., & Theodor Jensen  
Odense, Denmark  
(See Adv. on Page 55)  
Dansk Frokultur, A/S  
Kerteminde, Denmark  
Dreyer, Fr.  
Aarhus, Denmark  
Hartmann & Co., Hjalmar  
Copenhagen, Denmark  
Hertz' Frokompagni A/S  
Copenhagen, Denmark

Jensens Eftf A/S, Jorgen  
Copenhagen, Denmark  
Morso Fro Kontor  
Nykobing Mors, Denmark  
Nordisk Fro Kontor  
Copenhagen, Denmark  
Olsen, Chr. A/S  
Odense, Denmark  
(See Adv. on Page 77)  
Ostergaards Froavl  
Stensballe, Horsens, Denmark  
Simested, M.  
Holstebro, Denmark  
Stallknecht & Meyer  
Copenhagen, Denmark  
Trifolium A/S  
Copenhagen, Denmark  
Veit, Simon  
Copenhagen, Denmark

### ENGLAND

Burlingham, G., & Sons, Ltd.  
Bury St. Edmunds, England  
Dunns Farm Seeds, Ltd.  
Salisbury, England  
Eastes & Loud  
Ashford, Kent, England  
Eastern Counties Farmers' Co-Operative  
Assn., Ltd.  
Ipswich, England  
Gascon Son & Buckland  
Worcester, England  
Goldsmith Bros., Ltd.  
Bury St., Edmunds, England  
Hasler & Co., Ltd.  
Dunmow, Essex, England  
Hurst & Son  
London, England  
Johnson & Son, Ltd., W. W.  
Boston, England  
Le May & Co., C. W.  
London, England  
McMaster & Frankish  
Seething Lane, London, England  
Pope & Chapman, Ltd.  
Bishop's Stortford, England  
Whalley, Ltd., Thomas  
Liverpool, England  
Woods, Sadd, Moore & Co., Ltd.  
London, Norfolk, England

### ESTHONIA

Esthonian Seed Co.  
Tallinn, Esthonia  
Tonisson & Bros.  
Tartu, Esthonia

### FRANCE

Beillard, Frederic  
Le Mans, France  
Bernard, Paul  
Isle Sur Sorgue, France  
Cherot, Michael (broker)  
Paris, France  
Clause, L.  
Bretigny-Sur-Orge, Seine-et-Oise,  
France  
(See Adv. on Page 73)  
Cietin, L., & Co.  
Charlieu, France  
Desjobert & Fils, E.  
Moulins, France  
Dreyfus, Paul  
Paris, France  
Etablissements Leplatre et Fauchet  
Paris, France  
Galabert, Fnd.  
Caussade (Tarn-et-Garonne), France  
Graines "Selection"  
Paris, France  
Guignard, A.  
Tours, France  
Joly, Marcel A. (broker)  
Paris, France  
Lafond, Theophile  
Montelimar, France

## FOREIGN FIELD SEEDS—Continued

Le Grand & Cie  
Moulins, France  
Les Fils de L'Abbe Leplatre  
Artenay-Loiret, France  
Loras Freres  
Lyon, France  
Lucereau-Boussard  
Chartres, France  
Palisse, H.  
Chateauroux, France  
Planchard, Cayla & Co.  
Paris, France  
Plessis & Cie., A.  
Paris, France  
Ravaul, A. (broker)  
Paris, France  
Rouset & Fils  
Paris, France  
Salmon, Maurice (broker)  
Paris, France  
Simon Louis Frere & Cie  
Bruyeres-le-Chatel (Seine-et-Oise),  
France  
Societe d'Exportation des Graines de  
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Valence-Sur-Rhone, France

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Gross-Tabarz (Thuer.), Germany  
Boettcher & Voelcker  
Tabarz in Thuringen, Germany  
Boettcher, Inc., Otto  
Tabarz in Thuringen, Germany  
Bruhn, D. P., G.m.b.h.  
Kiel, Germany  
Christensen, V. L.  
Erfurt, Germany  
DeWit, John (broker)  
Hamburg, Germany  
Ernst und von Spreckelsen  
Hamburg, Germany  
Fiegel, Benno  
Berlin, Germany  
Friedebergs Wive, Gustav  
Stettin, Germany  
Funk & Kerstan  
Stettin, Germany  
Gebruder Dippe, A. G.  
Quedlinburg, Germany  
Gebruder Kallmeyer, A. G.  
Erfurt, Germany  
Geucke, Rudolf  
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Haage, Franz Anton  
Erfurt, Germany  
Hirsch, S.  
Frankfort, A. M., Worms, Berlin,  
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Kloster, A. P.  
Flensburg, Germany  
Knoll, K.  
Bamberg, Germany  
Le Coq & Co., A. G., A.  
Darmstadt, Germany  
Liefmann'Sohne Nachf, R.  
Hamburg, Germany  
Metz & Co.  
Berlin-Steglitz, Germany  
Müller & Co., D.  
Hamburg, Germany  
Noth, Jr., Johs  
Fishbach (Gotha), Germany  
Nungesser, L. C.  
Griesheim near Darmstadt, Germany  
Pehle & Beckmann  
Leer in Ostfriesland, Germany

Robra, Carl  
Aschersleben, Germany  
Sachs, David  
Quedlinburg, Germany  
Schott, Gustav  
Aschaffenburg, Germany  
Steingaesser & Co., G. J.  
Miltlenberg, Bavaria, Germany  
Weise & Pfaffe  
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Hungarian Seed Culture Co., Ltd.  
Budapest, IV. Szep-ucca 1, Hungary  
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Mauthner, Ltd., Edmund  
Budapest, Hungary  
Tibor, Kemeny  
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Lahore, India  
Sulabh Nursery & Seed Co. (Jute Seed)  
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## ITALY

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Fasolo, Angelo  
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Zealand, Ltd.  
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Nimmo & Blair, Ltd.  
Dunedin, New Zealand  
**Paterson & Co., A. S.**  
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(See Adv. on Page 87)  
Wright, Stephenson & Co., Ltd.  
Wellington, New Zealand  
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**NORWAY**

Bauman, Jos.  
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Bergen, Norway  
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Grimstad Gartneri  
Grimstad, Norway  
Michelet, A.  
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Hamar, Norway  
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VEGETABLE PLANTING TABLE

Kind of vegetable	Seeds or roots re- quired for 100 ft. of drill	One Acre	Distance for plants to stand				Depth of planting	Time of planting in open ground		Ready for use after planting
			Rows apart			Plants apart in rows		South	North	
Horse culti- vation	Hand culti- vation									
Asparagus, seed.....	1 oz.....	5 lbs.....	30 to 36 in.....	1 to 2 ft.....	3 in.....	1 in.....	Autumn or early sp'ng	Early spring.....	2 years	
Asparagus, roots.....	60 to 80.....	1 bu.....	3 to 5 ft.....	12 to 24 in.....	15 to 20 in.....	3 to 5 in.....	Autumn or early sp'ng	Early spring.....	1 year	
Beans, dwarf.....	1 pt.....	1 bu.....	30 to 36 in.....	18 to 24 in.....	2 in.....	1 in.....	Feb. to April (Aug. to Sept.).....	April to July.....	42 to 75 days	
Beans, pole.....	1/2 pt.....	1/2 bu.....	3 to 4 ft.....	3 to 4 ft.....	3 to 4 ft.....	1 in.....	Late spring.....	May and June.....	72 to 90 days	
Beets.....	1 oz.....	6 lbs.....	28 to 36 in.....	12 to 18 in.....	2 in.....	1 in.....	Feb. to April (Aug. to Sept.).....	April to August.....	45 to 60 days	
Brussels sprouts.....	1/4 oz.....	2 oz.....	30 to 36 in.....	24 to 30 in.....	16 to 24 in.....	1/2 in.....	Jan. to July.....	May and June.....	100 to 120 days	
Cabbage, early.....	1/4 oz.....	1/4 lb.....	30 to 36 in.....	24 to 30 in.....	12 to 18 in.....	1/2 in.....	Oct. to Dec.....	Mar. and Apr. (Start in hotbed during Feb.)	90 to 110 days	
Cabbage, late.....	1/4 oz.....	1/4 lb.....	30 to 40 in.....	24 to 36 in.....	16 to 24 in.....	1/2 in.....	June and July.....	May and June.....	110 to 120 days	
Carrot.....	1/2 oz.....	2 lbs.....	30 to 36 in.....	18 to 24 in.....	2 in.....	1/2 in.....	Mar. and Apr. Sept.....	April to June.....	55 to 80 days	
Cauliflower.....	1/4 oz.....	1 oz.....	30 to 36 in.....	24 to 30 in.....	14 to 18 in.....	1/2 in.....	Jan. and Feb. [June].....	April to June.....	95 to 110 days	
Celery.....	1/4 oz.....	1/4 lb.....	3 to 6 ft.....	18 to 36 in.....	2 in.....	1/8 in.....	Aug. and Oct.....	May & June. (Start in hotbed or cold frame during Mar. or Apr.)	120 to 150 days	
Collards.....	1/4 oz.....	1/4 lb.....	30 to 36 in.....	24 to 30 in.....	14 to 18 in.....	1/2 in.....	May and June.....	Late spring.....	100 to 120 days	
Corn, sweet.....	1/4 oz.....	6 qts.....	36 to 42 in.....	30 to 36 in.....	4 to every 3 ft.....	1 in.....	Feb. to April.....	May to July.....	55 to 90 days	
Cress, water.....	1/2 oz.....	2 lbs.....	Broadcast.....	4 to 6 ft.....	4 every 3 ft.....	water.....	Early spring.....	April to Sept.....	60 to 70 days	
Cucumber.....	1/2 oz.....	1/4 lb.....	4 to 6 ft.....	24 to 30 in.....	18 in.....	1 in.....	Feb. and Mar. [Sept.].....	April to July.....	50 to 70 days	
Eggplant.....	1/8 oz.....	1/4 lb.....	30 to 36 in.....	24 to 30 in.....	12 in.....	1/2 in.....	Feb. to April.....	Apr. & May. (Start in hotbed during Mar.)	125 to 140 days	
Endive.....	1 oz.....	2 lbs.....	30 in.....	18 in.....	12 in.....	1/2 in.....	Feb. to April.....	April [July].....	100 days	
Kale, or borecole.....	1/4 oz.....	1 lb.....	30 to 36 in.....	18 to 24 in.....	18 in.....	1/2 in.....	Oct. to Feb.....	Aug. to Sept. [March and April].....	55 to 60 days	
Kohl-rabi.....	1/4 oz.....	1 lb.....	30 to 36 in.....	18 to 24 in.....	6 in.....	1/2 in.....	Sept. to May.....	March to May.....	50 to 70 days	
Leek.....	1/2 oz.....	4 lbs.....	30 to 36 in.....	14 to 20 in.....	4 in.....	1/2 in.....	May to Sept.....	March to May.....	120 to 150 days	
Lettuce.....	1/2 oz.....	3 lbs.....	30 in.....	12 to 18 in.....	6 in.....	1/2 in.....	Sept. to March.....	March to Sept.....	70 to 90 days	
Muskmelon.....	1/2 oz.....	2 lbs.....	6 to 8 ft.....	6 to 8 ft.....	4 every 4 ft.....	1 in.....	Feb. to April.....	April to June.....	85 to 150 days	
Watermelon.....	1 oz.....	2 lbs.....	8 to 12 ft.....	8 to 12 ft.....	4 every 6 ft.....	1 in.....	March to May.....	May and June.....	100 to 130 days	
Mustard.....	1/4 oz.....	1 lb.....	30 to 36 in.....	12 to 18 in.....	4 or 5 to ft.....	1/4 in.....	Autumn or early sp'ng	March to May. [Sept.]	60 to 90 days	
Okra.....	2 oz.....	8 lbs.....	4 to 5 ft.....	3 to 4 ft.....	24 in.....	1 in.....	Feb. to April.....	May and June.....	90 to 140 days	
Onion, seed.....	1 oz.....	4 lbs.-5 lbs.....	24 to 36 in.....	12 to 18 in.....	2 in.....	1/2 in.....	Oct. to March.....	April to May.....	125 to 150 days	
Onion, sets.....	1 qt.....	1 qt.....	24 to 36 in.....	12 to 18 in.....	4 or 5 to ft.....	1 in.....	Early spring.....	Autumn and Feb. to May.....	100 days	
Onion seed for sets.....	1 lb.....	50 lbs.....	24 to 36 in.....	12 to 18 in.....	1/2 in.....	1/2 in.....	Early spring.....	April.....	90 days	
Parsley.....	1/4 oz.....	3 lbs.....	24 to 36 in.....	12 to 18 in.....	3 in.....	1/8 in.....	Sept. to May.....	Sept. and early spring.....	65 to 90 days	
Parsnip.....	1/2 oz.....	3 lbs.....	30 to 36 in.....	18 to 24 in.....	2 in.....	1/2 in.....	March and April.....	April and May.....	130 days	
Peas.....	1 pt.....	1 bu.....	3 to 4 ft.....	30 to 36 in.....	1 in.....	1 in.....	Sept. to April.....	March to June.....	45 to 75 days	
Pepper.....	1/8 oz.....	2 oz.....	30 to 36 in.....	18 to 24 in.....	15 in.....	1/2 in.....	Early spring.....	May and June. (Start early plants in hotbed during March)	130 to 150 days	
Potatoes, Irish.....	5 lbs.....	16 bu.....	30 to 36 in.....	24 to 36 in.....	14 in.....	4 in.....	Jan. to April.....	during March)	90 to 150 days	
Potatoes, sweet.....	3 lbs(or 75 slips)....	.....	3 to 5 ft.....	3 to 5 ft.....	14 in.....	3 in.....	April and May.....	March to June.....	150 days	

Kind of vegetable	Seeds or roots re- quired for 100 ft. of drill	One Acre	Distance for plants to stand				Depth of planting	Time of planting in open ground		Ready for use after planting
			Rows apart		Plants apart in rows	South		North		
			Horse culti- vation	Hand culti- vation						
Pumpkin.....	½ oz.....	4 lbs.....	8 to 12 ft.....	8 to 12 ft.....	4 every 6 ft...	1 in.....	April and May.....	May to July.....	75 to 90 days	
Radish.....	1 oz.....	10 lbs.....	24 to 36 in....	12 to 18 in....	1 in.....	½ in.....	Sept. to April.....	March to Sept.....	20 to 75 days	
Rhubarb, seed.....	½ oz.....	.....	36 in.....	30 to 36 in....	6 in.....	½ to 1 in....	.....	Early spring.....	3 years	
Rhubarb, roots.....	33 roots....	.....	3 to 5 ft.....	3 to 5 ft.....	3 ft.....	2 to 3 in....	.....	Autumn or early sp'ng.	1 year	
Ruta-baga.....	¼ oz.....	2 lbs.....	30 to 36 in....	18 to 24 in....	6 in.....	½ to 1 in....	Aug. and Sept.....	May and June.....	90 days	
Salsify.....	1 oz.....	8 lbs.....	30 to 36 in....	18 to 24 in....	2 in.....	½ in.....	.....	Early spring.....	150 days	
Spinach.....	1 oz.....	8 lbs.....	30 to 36 in....	12 to 18 in....	2 in.....	1 in.....	Sept. to Feb.....	Sept. or very e'ly spr'g	45 days is min.	
Squash, summer.....	½ oz.....	4 lbs.....	3 to 4 ft.....	3 to 4 ft.....	4 every 4 ft...	1 in.....	Spring.....	April to June.....	65 to 70 days	
Squash, winter.....	½ oz.....	2 lbs.....	7 to 10 ft.....	7 to 10 ft.....	4 every 6 ft...	1 in.....	Spring.....	May to July.....	125 days	
Tomato.....	⅛ oz.....	1½ oz....	3 to 5 ft.....	3 to 4 ft.....	3 by 4 ft.....	½ in.....	Dec. to March.....	May to June.....	125 to 150 days	
Turnip.....	½ oz.....	1 lb.....	24 to 36 in....	18 to 24 in....	2 in.....	¼ in.....	Aug. to Oct.....	April and Aug.....	45 to 90 days	

Helpful Hints to Vegetable Gardeners

DECIDE early how much ground you will use and what you will plant.

Plow or spade before the ground freezes, if you can. A little fertilizer or manure will insure better crops.

Don't cover the seed too deep. It will germinate more quickly if only a little soil is on the seed. See full cultural directions on the packets.

Leave the garden alone until the plants come up. If you have sown bulk seeds, thin rows after plants are up an inch or two. Using seed-tape reduces thinning to a minimum.

Lima beans should be planted with the eye down and covered one inch deep.

Sow radishes directly in the row with your parsley.

Order your seeds early so that you can take advantage of the first signs of spring.

When you water, do it thoroughly—don't sprinkle, soak.

Plant early everything but beans, wrinkled peas, and vine crops.

If soil is dry, water may be put on. Let it run slowly and don't spare the water—it's cheap.

Don't think water will take the place of thorough cultivation—it won't.

You will have a better garden if you use the hoes more, and the hose less.

Weeds are garden robbers. Kill them when they are small.

For large head lettuce, thin out to at least six inches.

Plant enough to have some vegetables for home canning.

Buy only first-class, reputable materials, even if it means less of them.

Get a good spray and use it.

Hoe often to loosen the soil and hold moisture around the roots of the plants.

You cannot do good work with poor tools.

Have a good hoe, rake, fork and spade.

A small hand cultivator will make you feel like a professional gardener. It will soon pay for itself, too.

Don't try "watchful waiting" for bugs, worms and other vermin. Swat 'em or they will spoil your plants.

Plant small, quick growers like lettuce, radishes, etc., between the rows of larger, slower maturing sorts. In the case of early sorts such as spinach, start tomatoes, corn, etc., between the rows to occupy the ground after the former is harvested.

Never cultivate or handle any kind of beans when the vines are wet. This is the easiest way to spread a serious disease and ruin the crop.

Success against weeds means keeping them out, not taking them out after they get in.

To ensure a succession of such plants as peas, beans, lettuce, radishes, beets, kohlrabi, etc., sow a fresh row every week or so.

## CHARACTERISTICS OF VEGETABLE SEEDS

The figures in the following table are intended to be approximate only, as variations occur in varieties and are also due to conditions of growth, harvest and storage.

Vegetable	Average Germination 1 Year Old Seed	Average Duration of Germinating Power in Years	Average Number of Seeds per Ounce	Average Weight of Quart of Seed in Ounces	Amount Required for 100 Feet of Drill	Amount of Seed required Per Acre	Depth of Planting
Asparagus.....	90%	3	1,000	32	1 oz.	5 lbs.	1 in.
Beans, Dwarf.....	90%	3	100	30	1 lb.	60 lbs.	1 in.
Beans, Pole.....	90%	3	100	30	½ lb.	30 lbs.	1 in.
Beet, Garden.....	80%	4	1,750	10	1 oz.	6 lbs.	1 in.
Beet, Mangel.....	80%	4	1,200	10	1 oz.	5 lbs.	1 in.
Brussels Sprouts....	85%	4	6,500	24	¼ oz.	2 oz.	½ in.
Cabbage.....	85%	4	5,000	24	¼ oz.	4 oz.	½ in.
Carrot.....	75%	3	14,000	12	½ oz.	2 lbs.	½ in.
Cauliflower.....	75%	4	14,000	24	¼ oz.	1 oz.	½ in.
Celery.....	80%	3	100,000	16	¼ oz.	4 oz.	⅛ in.
Collards.....	88%	3	4,500	24	¼ oz.	4 oz.	½ in.
Corn, Sweet.....	85%	3	125	23	¼ lb.	12 lbs.	1 in.
Cucumber.....	85%	5	1,000	18	½ oz.	2 lbs.	1 in.
Eggplant.....	75%	4	5,000	18	⅛ oz.	4 oz.	½ in.
Endive.....	80%	5	13,500	12	1 oz.	2 lbs.	½ in.
Kale.....	85%	4	7,500	24	¼ oz.	1 lb.	½ in.
Kohlrabi.....	85%	3	7,000	24	¼ oz.	1 lb.	½ in.
Leek.....	80%	2	8,000	18	½ oz.	4 lbs.	½ in.
Lettuce.....	90%	6	16,000	14	½ oz.	3 lbs.	½ in.
Melon, Musk.....	85%	5	1,200	12	½ oz.	2 lbs.	1 in.
Melon, Water.....	85%	5	225	16	1 oz.	2 lbs.	1 in.
Mustard.....	85%	3	18,000	30	¼ oz.	1 lb.	¼ in.
Okra.....	85%	1	425	20	2 oz.	8 lbs.	1 in.
Onion.....	80%	2	12,500	16	1 oz.	4 lbs.	½ in.
Parsley.....	70%	1	17,500	12	¼ oz.	3 lbs.	⅛ in.
Parsnip.....	75%	1	2,800	10	½ oz.	3 lbs.	½ in.
Peas.....	90%	3	50 to 150	30	1 lb.	60 lbs.	1 in.
Pepper.....	75%	2	4,000	16	⅛ oz.	2 oz.	½ in.
Pumpkin.....	90%	4	100	9	½ oz.	4 lbs.	1 in.
Radish.....	90%	4	5,000	24	1 oz.	10 lbs.	½ in.
Salsify.....	75%	1	4,500	12	1 oz.	8 lbs.	½ in.
Spinach.....	80%	3	3,000	14	1 oz.	8 lbs.	1 in.
Squash, Summer....	90%	4	300	20	½ oz.	4 lbs.	1 in.
Squash, Winter....	90%	4	125	14	½ oz.	2 lbs.	1 in.
Tomato.....	85%	3	7,500	10	⅛ oz.	1½ oz.	½ in.
Turnip.....	90%	4	10,000	24	½ oz.	1 lb.	¼ in.

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IMPORTS AND PRICES OF VEGETABLE SEEDS

Compiled from figures published by Department of Commerce.

Kind of Seed	Imports—Calendar Years						Average Prices					
	1927	1928	1929	1930	1931	1932*	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.	Per lb.
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	1927	1928	1929	1930	1931	1932*
Beet, gdn.	327,268	338,986	355,820	343,877	351,240	68,216	\$1.63	\$.164	\$.184	\$.176	\$.155	\$.146
Beet, mgl.	228,971	249,126	224,465	318,126	366,927	68,727	.102	.106	.127	.111	.093	.088
Cabbage..	275,341	244,675	129,047	341,897	250,180	51,903	.535	.507	.675	.584	.499	.543
Carrot...	29,059	55,299	22,846	20,798	15,751	7,496	.496	.379	.513	.572	.382	.283
Califlwr..	16,643	15,439	14,876	18,826	17,501	3,871	6.396	5.894	6.618	6.327	5.747	6.882
Kale.....	48,025	59,856	66,735	72,649	41,996	10,613	.18	.184	.185	1.77	.187	.175
Kohlrabi..	11,822	14,849	12,769	15,249	19,359	2,725	.488	.454	.424	.414	.324	.314
Onion....	252,203	272,261	193,288	203,620	190,011	18,871	1.826	1.737	1.343	1.487	.830	.393
Parsley...	95,500	434,167	150,994	348,852	308,280	147,912	.167	.139	.209	.109	.066	.041
Parsnip...	32,081	18,376	15,273	18,351	15,620	10,642	.107	.145	.131	.140	.130	.104
Pepper...	3,921	2,868	2,145	2,220	4,038	831	.677	.844	.837	.918	.733	.727
Radish...	742,178	588,766	521,405	872,765	695,682	290,530	.158	.163	.165	.172	.148	.140
Spinach..	2,085,764	3,991,955	3,890,584	2,762,797	2,030,618	415,936	.093	.096	.092	.092	.085	.083
Turnip...1,	145,517	1,526,870	717,029	1,194,633	1,090,140	219,388	.113	.107	.121	.123	.109	.105
Rutabaga.	201,166	234,201	43,041	177,578	169,672	44,035	.110	.093	.135	.108	.118	.117

\*Six months ended June 30, 1932. All prices are F. O. B. port of origin and not including duty.

LAWN MIXTURES & INDIVIDUAL GRASSES

For The Trade



Rhododendrons, Azaleas, Kalmias, Huckleberries, Cranberries and all plants of the same Ericaceous Family will flourish only when the soil is of the proper chemical condition which this class of material demands.

Watch the change in your stock after treating the soil with RHODONO.

TRADE PRICE  
\$3.00 per 100 lbs.  
\$50.00 per Ton  
SEND FOR CIRCULAR

Golf Mixtures, Pasture Mixtures, Foreign and Domestic Grasses, Fertilizers, etc.

Send List of Your Requirements for Quotation

Garfield Williamson  
NEW YORK'S WHOLESALE GRASS SEED HOUSE  
46 WEST BROADWAY  
NEW YORK, N.Y.

Cables: Grassmere New York



The above picture shows part of the trial grounds for the improvement of vegetable seed stocks of F. Lagomarsino & Sons. Breeding cages and bags are placed over selected carrot plants to obtain desirable inbred lines for improved strains of carrots.

# *Let us have your inquiries on Surplus 1932 Stocks*

**NOW CONTRACTING FOR 1933 DELIVERY**

*We Specialize on*

BEANS  
CARROT  
LETTUCE

PARSNIP  
BEET  
PEAS

ONION  
CELERY  
LIMA BEANS



Top row, left to right: Louis B., Fred A., Andrew J. Lagomarsino. Bottom row, left to right: John B. and Peter J. Lagomarsino.

## **F. Lagomarsino & Sons**

CABLE ADDRESS  
**LAGO**

**SEED GROWERS**  
**Sacramento, California**

German, Spanish and  
Italian Correspondence

VEGETABLE SEED ACREAGE AND PRODUCTION  
IN 1929 OF THOSE REPORTING

*Compiled from data obtained by the Bureau of the Census  
U. S. Department of Commerce*

Kind	Establish- ments reporting Number	Area harvested Acres	Production Pounds	Leading State
Beans, Garden.....	62	64,981	37,884,031	Michigan
Beans, Lima.....	13	4,259	3,560,214	California
Beet.....	28	803	482,749	Washington
Cabbage.....	22	838	366,879	Washington
Carrot.....	11	978	549,102	California
Celery.....	6	40	10,190	California
Cucumber.....	15	1,918	388,572	Colorado
Kale.....	7	24	19,661	Washington
Lettuce.....	10	1,086	315,938	California
Muskmelon.....	17	1,574	288,624	Colorado
Onion.....	20	1,210	388,192	California
Parsley.....	5	83	40,972	California
Parsnip.....	8	55	43,994	California
Peas.....	45	88,743	65,661,742	Idaho
Pepper.....	13	802	61,838	New Jersey
Radish.....	15	2,065	593,822	Wisconsin
Rutabaga.....	10	134	174,586	Washington
Spinach.....	8	226	236,004	Washington
Squash and Pumpkin.....	25	1,333	240,473	Nebraska
Sweet Corn.....	44	7,694	7,607,991	Nebraska
Tomato.....	39	3,008	163,641	California
Turnip.....	15	928	1,111,182	Washington
Watermelon.....	13	3,497	386,988	Florida
All other*.....	23	680	4,410,000	Michigan

\*Includes cauliflower, collard, eggplant, kohlrabi, mangel-wurzel, and others not specified.

# TOMATO SEED

*for the Wholesale Trade Only*

**We have grown no other seed for over 30 years**

**ADRIAN SEED GROWING CO.**

Successor to W. H. Barrett  
ADRIAN, MICH.

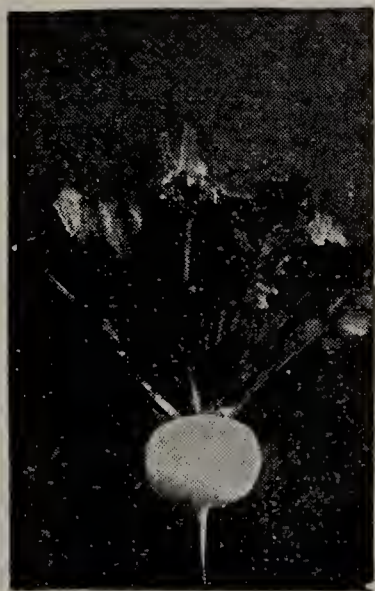
*Use the* **TRADE MARK SECTION**

**starting page 40—for the leading Trade Marks and Brands used  
by the Seedsmen and Manufacturers  
of Allied Lines.**

# QUALITY SEEDS at

## REDUCED PRICES

WHOLESALE  
GROWERS  
FOR  
VEGETABLE  
AND FLOWER  
SEEDS



Prices for contract or prompt  
delivery from KYOTO and  
New York stocks quoted by

**I. L. RADWANER**  
SEED CO. INC.

115 Broad St., New York, N. Y.

Agents for TAKII & Co. Ltd., KYOTO (JAPAN)

## EXCLUSIVE GROWERS OF SEED PEAS & BEANS

Wilt resistant pure line stocks of  
market and canner's varieties of  
peas are available for distribution.

All bean stocks are bred for free-  
dom from mosaic, bacterial blight  
and anthracnose.

Wire or write us for quotations.

"OUR SEEDS GROW FRIENDS"

**WASHBURN WILSON**  
SEED COMPANY

MOSCOW

IDAHO

## Our Selected Strains of TOMATO SEED

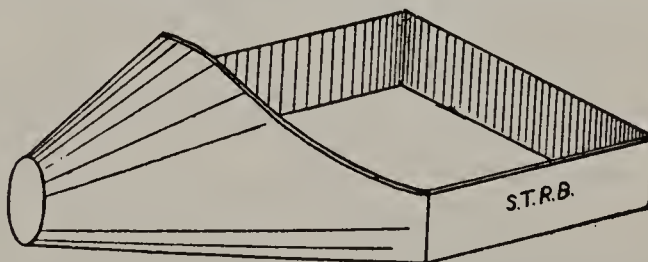
are certified by the  
NEW JERSEY DEPARTMENT  
OF AGRICULTURE

We are growers for the wholesale seed  
trade only of carefully selected and tried  
strains of

Pepper « » Cucumber  
Egg Plant « » Squash  
Pumpkin  
Muskmelon « » Watermelon

Every shipment is backed by the Hurff  
reputation

**EDGAR F. HURFF**  
Swedesboro, N. J.



## SEED AND GRAIN SAMPLE PANS

For containing grain or seed after  
sampling. Advantageous in making  
analyses and for display. Seamless  
Wellsville steel—dark blue and non-  
glaring.

No. 31—12x16x2 in.—3 qts. wheat  
capacity. Price each, \$1.50; half dozen,  
\$8.50. Aluminum, same price.

No. 32—8½x12x1½ in.—1½ qts.  
wheat capacity. Price each, \$1.25;  
half dozen, \$7.00.

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BUREAU**

325 W. Huron Street  
CHICAGO, ILL.

## WHOLESALE GARDEN SEEDS

### ALABAMA

Shreve & Son  
Andalusia, Ala.  
Barber Brothers Seed Co.  
Birmingham, Ala.  
Birmingham Seed Co.  
Birmingham, Ala.  
Pharr Co., King (Okra)  
Catherine, Ala.  
Poyner Seed Co.  
Dothan, Ala.  
North Alabama Seed Co.  
Florence, Ala.  
Wind & Co., I.  
Huntsville, Ala.  
Van Antwerp Seed Co.  
Mobile, Ala.

### ARKANSAS

Fort Smith Seed Co., Inc.  
Fort Smith, Ark.  
Lee, Arthur G.  
Fort Smith, Ark.

### CALIFORNIA

Fish, Henry Berrien Seedsmen (Beans)  
Carpinteria, Calif.  
(See Adv. on Page 73)  
Bodger Seeds, Ltd.  
El Monte, Los Angeles County, Calif.  
(See Adv. on Page 82)  
Aggeler & Musser Seed Co., Inc.  
Los Angeles, Calif.  
Germain Seed & Plant Co.  
Los Angeles, Calif.  
(See Adv. on Page 145)  
Southern California Seed Co.  
Los Angeles, Calif.  
Lagomarsino & Sons, F.  
Sacramento, Calif.  
(See Adv. on Page 61)  
Kellogg Seed Co. of California  
Salinas, Calif.  
Bertrand Seed Co.  
San Francisco, Calif.  
(See Adv. on Page 59)  
Ferry-Morse Seed Co.  
San Francisco, Calif.  
(See Adv. on Page 70)  
Oriental Seed Co.  
San Francisco, Calif.  
Sherwood Seed Co.  
San Francisco, Calif.  
(See Adv. on Page 71)  
Haven Seed Co. (Tomatoes)  
Santa Ana, Calif.  
(See Adv. on Pages 5, 65 and 69)  
Fish Seed Co., Henry (Beans)  
Santa Barbara, Calif.  
Knox Seed Co.  
Stockton, Calif.  
(See Adv. on Page 45)  
Standard Seed Farms Co.  
Stockton, Calif.  
(See Adv. on Page 84)

### CANADA

McKenzie Co., Ltd., A. E.  
Brandon, Manitoba, Can.  
Bruce & Co., Ltd., John A.  
Hamilton, Ont., Can.  
Ewing, The Wm. Co., Ltd.  
Montreal, Quebec  
Keith & Sons, Geo.  
Toronto, Canada  
Rennie Seeds, Ltd., Wm.  
Toronto, Canada  
Steele, Briggs Seed Co., Ltd.  
Toronto, Canada  
(See Adv. on Page 26)

### COLORADO

Barteldes Seed Co.  
Denver, Colo.

Colorado Seed Co.  
Denver, Colo.  
Rocky Mountain Seed Co.  
Denver, Colo.  
Western Seed Co.  
Denver, Colo.  
Grand Junction Seed Co.  
Grand Junction, Colo.  
(See Adv. on Page 39)  
Burrell Seed Growers Co.  
Rocky Ford, Colo.  
Ebbert Seed Co.  
Rocky Ford, Colo.  
James, R. H.  
Rocky Ford, Colo.

### CONNECTICUT

Associated Seed Growers, Inc.  
New Haven, Conn.  
(See Adv. on Page 65)  
Comstock, Ferre & Co.  
Wethersfield, Conn.  
(See Adv. on Page 31)  
Hart Seed Co., Chas. C.  
Wethersfield, Conn.  
(See Adv. on Page 27)  
Woodruff & Sons, F. H.  
Milford, Conn.  
(See Adv. on Page 7)  
Woodruff & Sons, S. D.  
Orange, Conn.

### DELAWARE

Boggs & Son, Caleb  
Cheswold, Del.

### FLORIDA

Kilgore Seed Co., The  
Plant City, Fla.  
Crenshaw-McMichael Seed Co.  
Tampa, Fla.

### GEORGIA

Hastings-Associated Seeds, Inc.  
Atlanta, Ga.  
(See Adv. on Page 65)  
Walton Seed Co.  
Augusta, Ga.  
Curry-Arrington Seed Co.  
Rome, Ga.  
Schroer Plant Farms  
Valdosta, Ga.

### IDAHO

Crookham Co.  
Caldwell, Ida.  
Oakes & Co., Edgar L. (Sweet Corn)  
Caldwell, Ida.  
Duthie Co.  
Lewiston, Ida.  
Mark Means Seed Co.  
Lewiston, Ida.  
Moscow-Idaho Seed Co. (Peas and Beans)  
Moscow, Ida.  
Washburn Wilson Seed Co.  
Moscow, Ida.  
(See Adv. on Page 63)  
Darrow Bros. Seed & Supply Co.  
Twin Falls, Ida.

### ILLINOIS

Barnard Co., The W. W.  
Chicago, Ill.  
Hollenbach, Peter (Onion Sets)  
Chicago, Ill.  
Leonard Seed Co.  
Chicago, Ill.  
(See Adv. on Third Cover)  
Rogers Bros. Seed Co.  
Chicago, Ill.  
(See Adv. on Rear Cover)  
Vaughan's Seed Store  
Chicago, Ill.  
Condon Bros. Seedsmen  
Rockford, Ill.

# 75 Years of Progress...

*in the Development of Superior Strains of Vegetable Seeds*

1,000 Acres of land used in careful breeding work  
21 Branches located in ten states for production of seed

*Breeders and Wholesale Growers of*

BEANS	CUCUMBER	ONION	SALSIFY
BEET	DANDELION	PARSLEY	SQUASH
BROCCOLI	DILL	PARSNIP	TOMATO
CANTALOUPE	ENDIVE	PEAS	TURNIP
CARROT	KALE	PUMPKIN	
SWEET CORN	LETTUCE	RADISH	

Behind Asgrow seed is an efficient organization of men trained through long experience in the production of pedigreed stocks of dependable quality.

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CABLE ADDRESS: ASGROW

## HAVEN SEED COMPANY

**Santa Ana, California**

Grows the better stock of

## Fordhook Bush Lima Beans



A Shipment of Fordhooks Leaving Our Warehouse for the Dock

## WHOLESALE GARDEN SEEDS—Continued

**INDIANA**

Crabbs, Reynolds, Taylor Co.  
Crawfordsville, Ind.  
Ohio Valley Seed Co.  
Evansville, Ind.  
Warren Seed Co.  
Indianapolis, Ind.

**IOWA**

Webster Co., Mel L.  
Independence, Ia.  
Sioux City Seed Co.  
Sioux City, Ia.

**KANSAS**

Mangelsdorf & Co., F. A.  
Atchison, Kan.  
Mangelsdorf Seed Co.  
Atchison, Kan.  
Barteldes Seed Co.  
Lawrence, Kan.  
Coe Seed & Grain Co., D. O.  
Topeka, Kan.  
Ross Bros. Seed Co.  
Wichita, Kan.

**KENTUCKY**

Brent Seed Co., C. S.  
Lexington, Ky.  
Bunton Seed Co.  
Louisville, Ky.  
Hall Seed Co.  
Louisville, Ky.

**LOUISIANA**

Reuter Seed Co., Inc.  
New Orleans, La.

**MARYLAND**

Blamberg Brothers, Inc.  
Baltimore, Md.  
(See Adv. on Page 59)  
Manns & Co., J.  
Baltimore, Md.  
Meyer Seed Co., The  
Baltimore, Md.  
Richardson & Co., E. Miller  
Baltimore, Md.

**MASSACHUSETTS**

Breck & Sons, Joseph  
Boston, Mass.  
Emerson Co., Thos. W.  
Boston, Mass.  
Ross Bros. Co.  
Worcester, Mass.

**MICHIGAN**

Morse & Son, Guy  
Central Lake, Mich.  
American Seed Co.  
Detroit, Mich.  
Ferry-Morse Seed Co.  
Detroit, Mich.  
(See Adv. on Page 70)  
Brown Seed Co., Alfred J.  
Grand Rapids, Mich.  
(See Adv. on Page 1)  
Brown & Son, Inc., A. J. (Peas and Beans)  
Grand Rapids, Mich.  
Isbell Seed Co.  
Jackson, Mich.  
(See Adv. on Page 59)

**MINNESOTA**

Farmer Seed & Nursery Co.  
Faribault, Minn.  
Northrup, King & Co.  
Minneapolis, Minn.  
(See Adv. on Page 21)

**MISSISSIPPI**

Rose Seed Co.  
Clarksdale, Miss.

Taylor-Tucker Seed Co.  
Jackson, Miss.  
Kimbrough Seed Co.  
Meridian, Miss.  
Vicksburg Seed Co.  
Vicksburg, Miss.

**MISSOURI**

Rudy-Patrick Seed Co.  
Kansas City, Mo.  
Chesmore Seed Co.  
St. Joseph, Mo.  
(See Adv. on Page 71)  
Corneli Seed Co.  
St. Louis, Mo.  
(See Adv. on Page 17)  
St. Louis Seed Co.  
St. Louis, Mo.  
(See Adv. on Page 59)  
United States Seed Co.  
St. Louis, Mo.

**MONTANA**

State Nursery & Seed Co.  
Helena, Mont.  
Northland Seed Co.  
Sidney, Mont.

**NEBRASKA**

Western Seed & Irrigation Co.  
Fremont, Neb.  
Griswold Seed & Nursery Co.  
Lincoln, Neb.  
(See Adv. on Page 49)  
Nebraska Seed Co.  
Omaha, Neb.  
(See Adv. on Page 49)

**NEW JERSEY**

Riverview Farms (Asparagus)  
Bridgeton, N. J.  
Shedaker & Son, B. D.  
Burlington, N. J.  
Pedrick & Son, Geo. R.  
Pedricktown, N. J.  
Hurff, Edgar F.  
Swedesboro, N. J.  
(See Adv. on Page 63)

**NEW YORK**

Harvey Seed Co.  
Buffalo, N. Y.  
Rice Seed Co., Jerome B.  
Cambridge, N. Y.  
(See Adv. on Page 31)  
Forrest Seed Co., Inc.  
Cortland, N. Y.  
Denison Seed Co., W. A.  
Ellisburg, N. Y.  
Page Seed Co.  
Greene, N. Y.  
(See Adv. on Page 45)  
Lupton & Son, J. M.  
Mattituck, L. I., N. Y.  
(See Adv. on Page 33)  
Amtorg Trading Corporation  
New York, N. Y.  
Herbst Bros.  
New York, N. Y.  
(See Adv. on Page 34)  
Madsen & Co., Thos.  
New York, N. Y.  
Stumpp & Walter Co.  
New York, N. Y.  
Suhr Co., E.  
New York, N. Y.  
(See Adv. on Page 75)  
Vaughan's Seed Store  
New York, N. Y.  
Williamson, Garfield  
New York City  
(See Adv. on Page 60)  
Gardner Seed Co.  
Rochester, N. Y.  
Metcalf & Son, Inc., B. F.  
Syracuse, N. Y.

## WHOLESALE GARDEN SEEDS—Continued

**NORTH CAROLINA**

Brabham Seed Co.  
Charlotte, N. C.  
Buxton White Seed Co.  
Elizabeth City, N. C.  
Hornaday Seed Co.  
Greensboro, N. C.  
Wyatt & Sons Co., Job P.  
Raleigh, N. C.  
Roudabush's Seed Store  
Wilmington, N. C.

**NORTH DAKOTA**

Will & Co., Oscar H.  
Bismarck, N. D.  
Magill & Co. (Operating Fargo Seed  
House)  
Fargo, N. D.

**OHIO**

Botzum Bros. Seed Co.  
Akron, Ohio  
Holmes Seed Co.  
Canton, Ohio  
Letherman Seed & Supply Co.  
Canton, Ohio  
Schilder Bros. (Onion Seed and Sets)  
Chillicothe, Ohio  
McCullough Seed Co., J. Chas.  
Cincinnati, Ohio  
(See Adv. on Page 15)  
McCullough's Sons Co., J. M.  
Cincinnati, Ohio  
(See Adv. on Page 27)  
Market Gardener's Seed Co.  
Cincinnati, Ohio  
(See Adv. on Page 15)  
Davis, Zack  
Delaware, Ohio

**OKLAHOMA**

Muskogee Seed House  
Muskogee, Okla.  
Clarke & Keller Seed Store  
Shawnee, Okla.  
Binding-Stevens Seed Co.  
Tulsa, Okla.

**OREGON**

Hand Seed Co., Inc., A. M.  
Portland, Ore.  
(See Adv. on Page 47)  
Lilly Co., The Chas. H.  
Portland, Ore.  
(See Adv. on Page 80)  
Portland Seed Co.  
Portland, Ore.

**PENNSYLVANIA**

Landreth Seed Co., D.  
Bristol, Pa.  
(See Adv. on Page 3)  
Schell, Inc., Walter S.  
Harrisburg, Pa.  
Buist Co., Robert  
Philadelphia, Pa.  
(See Adv. on Page 95)  
Burpee Co., W. Atlee  
Philadelphia, Pa.  
(See Adv. on Page 85)  
Dreer, Inc., Henry  
Philadelphia, Pa.

Michell Co., Henry F.  
Philadelphia, Pa.  
Simon & Son, I. N.  
Philadelphia, Pa.

**SOUTH CAROLINA**

Mixson Seed Co., W. H.  
Charleston, S. C.  
Kirkland Seed Co., B. B.  
Columbia, S. C.

**SOUTH DAKOTA**

Dakota Improved Seed Co.  
Mitchell, S. D.

**TENNESSEE**

Mayo, D. R.  
Knoxville, Tenn.  
Snapp & Sons, J. P.  
Limestone, Tenn.  
Buchanan Seed Company, R. B.  
Memphis, Tenn.  
Russell-Heckle Seed Co.  
Memphis, Tenn.  
Dobson-Hicks Co.  
Nashville, Tenn.

**TEXAS**

Magnolia Seed Co.  
Dallas, Texas  
Nicholson Seed Co., Robert  
Dallas, Texas  
American Seed Co.  
Fort Worth, Texas  
Texas-Associated Seeds, Inc.  
Harlingen, Texas  
(See Adv. on Page 65)

**UTAH**

Carpenter Seed Co.  
Provo, Utah  
Bailey & Sons Co.  
Salt Lake City, Utah  
Filer Seed Co.  
Salt Lake City, Utah  
Porter-Walton Seed Co.  
Salt Lake City, Utah

**VIRGINIA**

Diggs & Beadles  
Richmond, Va.  
Wood & Sons, T. W.  
Richmond, Va.  
Slate Seed Co. (Tobacco)  
South Boston, Va.

**WASHINGTON**

Christianson, Alf.  
Mt. Vernon, Wash.  
(See Adv. on Page 31)  
Lilly Co., Chas. H.  
Seattle, Wash.  
(See Adv. on Page 80)  
Spokane Seed Co.  
Spokane, Wash.

**WISCONSIN**

Olds Seed Co., L. L.  
Madison, Wis.  
Manitowoc Seed Co.  
Manitowoc, Wis.  
Wisconsin Cabbage Seed Co. (Cabbage  
Seed)  
Racine, Wis.

*We GROW and SELL the BEST in*

**TOMATO SEED**

ALL VARIETIES

≈

SINCE 1875

**HAVEN SEED CO., SANTA ANA, CALIF.**

## GROWERS GARDEN SEEDS

### CALIFORNIA

**Fish, Henry Berrien, Seedsmen (Beans)**  
**Carpinteria, Calif.**  
 (See Adv. on Page 73)

**Bodger Seeds, Ltd.**  
**El Monte, Los Angeles County, Calif.**  
 (See Adv. on Page 82)

**Pieters-Wheeler Seed Co.**  
**Gilroy, Calif.**  
 (See Adv. on Page 21)

**Rohnert, Waldo**  
**Gilroy, Calif.**  
 (See Adv. on Page 83)

**Aggeler & Musser Seed Co., Inc.**  
**Los Angeles, Calif.**

**Germain Seed & Plant Co.**  
**Los Angeles, Calif.**  
 (See Adv. on Page 145)

**Ellery, H. E.**  
**Oceanside, Calif.**

**Diener Co., Inc., Richard**  
**Oxnard, Calif.**  
 (See Adv. on Page 5)

**Lagomarsino & Sons, F.**  
**Sacramento, Calif.**  
 (See Adv. on Page 61)

**Associated Seed Growers, Inc.**  
**Salinas, Calif.**  
 (See Adv. on Page 65)

**Kellogg Seed Co. of California**  
**Salinas, Calif.**

**Bertrand Seed Co.**  
**San Francisco, Calif.**  
 (See Adv. on Page 59)

**Ferry-Morse Seed Co.**  
**San Francisco, Calif.**  
 (See Adv. Below)

**Sherwood Seed Co.**  
**San Francisco, Calif.**  
 (See Adv. on Opposite Page)

**Braslan Seed Growers Co., Inc.**  
**San Jose, Calif.**  
 (See Adv. on Page 73)

**Kimberlin Seed Co.**  
**San Jose, Calif.**

**Brown, Clarence R.**  
**San Juan Capistrano, Calif.**  
 (See Adv. on Page 71)

**Haven Seed Co. (Tomato)**  
**Santa Ana, Calif.**  
 (See Adv. on Pages 5, 65 and 69)

**R. A. Haven, Seedsman (Tomato)**  
**Santa Ana, Calif.**

**Henry Fish Seed Co. (Beans)**  
**Santa Barbara, Calif.**

**Standard Seed Farms Co.**  
**Stockton, Calif.**  
 (See Adv. on Page 84)

### CANADA

**Hogg & Lytle, Ltd.**  
**Oshawa, Ont., Canada**

**Hume & Sons, John**  
**Port Hope, Ont., Canada**

**Steele, Briggs Seed Co., Ltd.**  
**Toronto, Canada**  
 (See Adv. on Page 26)

### COLORADO

**Franklin, A. L. (Onions)**  
**Delta, Colo.**

**Barteldes Seed Co. (Beans and Onion Sets)**  
**Denver, Colo.**

**Grand Junction Seed Co.**  
**Grand Junction, Colo.**  
 (See Adv. on Page 39)

**Associated Seed Growers, Inc.**  
**Greeley, Colo.**  
 (See Adv. on Page 65)



*A harvest scene on our River Ranch near Sacramento, California. Cutting and loading ripe heads of New York Lettuce*

## FERRY-MORSE SEED CO.

**DETROIT, MICH.                      SAN FRANCISCO, CALIF.**

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Greeley, Colo.  
Burrell Seed Growers Co.  
Rocky Ford, Colo.  
Ebbert Seed Co.  
Rocky Ford, Colo.  
Garwood & Woodside (Cantaloupe)  
Rocky Ford, Colo.  
James, R. H.  
Rocky Ford, Colo.  
Robinson Seed Co., The J. C.  
Rocky Ford, Colo.  
Ryan Bros.  
Rocky Ford, Colo.

## CONNECTICUT

Associated Seed Growers, Inc.  
New Haven, Conn.  
(See Adv. on Page 65)  
Comstock, Ferre & Co.  
Wethersfield, Conn.  
(See Adv. on Page 31)  
Hart Seed Co., Chas. C.  
Wethersfield, Conn.  
(See Adv. on Page 27)  
Woodruff & Sons, F. H.  
Milford, Conn.  
(See Adv. on Page 7)  
Woodruff & Sons, S. D.  
Orange, Conn.

## DELAWARE

Boggs & Sons, Caleb  
Cheswold, Del.

## FLORIDA

Taylor Seedsman, Inc., H. M. (Watermelon)  
Lloyd, Fla.  
Willie & Son, J. J. (Watermelon)  
Lloyd, Fla.  
Gilbert, D. H. (Watermelon)  
Monticello, Fla.  
(See Adv. on Page 39)  
Girardeau Seed Co. (Watermelon)  
Monticello, Fla.  
Henderson Seed Farms (Watermelon)  
Monticello, Fla.  
Morris, W. M. (Watermelon)  
Monticello, Fla.  
Sattler, F. J. (Watermelon)  
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## GEORGIA

Hastings, H. G., Co.  
Atlanta, Ga.  
Richter & Sons, P. A. (Collard)  
Cairo, Ga.  
Steiner Branch Seed Co. (Watermelon)  
Grovetown, Ga.  
Arrington Co., H. H. (Okra)  
Rome, Ga.  
Schroer Plant Farms  
Valdosta, Ga.

## IDAHO

Crookham & Co.  
Caldwell, Idaho  
Cornell Seed Ranch  
Middleton, Idaho  
Hodge, G. D. (Lettuce Seed)  
Moscow, Idaho  
Moscow-Idaho Seed Co. (Peas and Beans)  
Moscow, Idaho  
Washburn-Wilson Seed Co.  
(Peas and Beans)  
Moscow, Idaho  
(See Adv. on Page 63)  
Idaho Equity Exchange (Lettuce)  
Nampa, Idaho  
Associated Seed Growers, Inc.  
St. Anthony, Idaho  
(See Adv. on Page 65)

## ILLINOIS

Barnard Co., W. W.  
Chicago, Ill.  
Leonard Seed Co.  
Chicago, Ill.  
(See Adv. on Third Cover)

Rogers Bros. Seed Co. (Peas and Beans)  
Chicago, Ill.  
(See Adv. on Rear Cover)

Vaughan's Seed Store  
Chicago, Ill.  
Condon Bros., Seedsman  
Rockford, Ill.

## INDIANA

Crabbs Reynolds Taylor Co.  
Crawfordsville, Ind.

## IOWA

Hoopes & Co., J. E.  
Muscatine, Iowa  
Sioux City Seed Co.  
Sioux City, Iowa

## KANSAS

Barteldes Seed Co.  
Lawrence, Kan.

## MARYLAND

Blamberg Bros., Inc.  
Baltimore, Md.  
(See Adv. on Page 59)

## MASSACHUSETTS

Breck & Sons, Joseph  
Boston, Mass.  
Emerson Co., Thos. W.  
Boston, Mass.

## MICHIGAN

Adrian Seed Growing Co. (Tomato Seed)  
Adrian, Mich.  
(See Adv. on Page 62)  
Gebruder Dippe, A. G.  
Birmingham, Mich.  
Morse & Son, Guy  
Central Lake, Mich.  
Ferry-Morse Seed Co.  
Detroit, Mich.  
(See Adv. on Page 70)  
Brown & Son, Inc., A. J. (Peas and Beans)  
Grand Rapids, Mich.  
Brown Seed Co., Alfred J. (Peas and Beans)  
Grand Rapids, Mich.  
(See Adv. on Page 1)  
Isbell Seed Co.  
Jackson, Mich.  
(See Adv. on Page 59)

## MINNESOTA

Northrup, King & Co.  
Minneapolis, Minn.  
(See Adv. on Page 21)

## MISSOURI

Corneli Seed Co.  
St. Louis, Mo.  
(See Adv. on Page 17)  
United States Seed Co.  
St. Louis, Mo.

## MONTANA

Associated Seed Growers, Inc.  
Bozeman, Mont.  
(See Adv. on Page 65)  
Gallatin Valley Seed Co.  
Bozeman, Mont.  
Associated Seed Growers, Inc.  
Hamilton, Mont.  
(See Adv. on Page 65)

## NEBRASKA

Western Seed & Irrigation Co.  
Fremont, Neb.  
Coy & Son, Chauncey P. (Vine)  
Waterloo, Neb.  
Robinson Seed Co., J. C. (Vine and Corn)  
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Shedaker & Son, B. D.  
Burlington, N. J.  
Hammell Seed Farms, Geo. Q.  
Cedarville, N. J.  
Pedrick & Son, Geo. R.  
Pedricktown, N. J.  
**Hurff, Edgar F.**  
Swedesboro, N. J.  
(See Adv. on Page 63)

**NEW YORK**

**Rice Seed Co., Jerome B.**  
Cambridge, N. Y.  
(See Adv. on Page 31)  
**Allen, Linnaeus**  
Cutchogue, Long Island, N. Y.  
**Lupton & Son, J. M.**  
Mattituck, L. I., N. Y.  
(See Adv. on Page 33)  
**Herbst Brothers**  
New York, N. Y.  
(See Adv. on Page 34)  
**Madsen & Co., Thos.**  
New York, N. Y.  
**Stumpp & Walter Co.**  
New York, N. Y.  
**Suhr Co., E.**  
New York, N. Y.  
(See Adv. on Page 75)

**NORTH DAKOTA**

**Will & Co., Oscar H.**  
Bismarck, N. D.

**OHIO**

**Holmes Seed Co.**  
Canton, Ohio  
**Schilder Bros. (Onion Seed and Sets)**  
Chillicothe, Ohio  
**Quirk, John B.**  
North Madison, Ohio  
**Limeshale Seed Co.**  
Waldo, Ohio

**OREGON**

**Gill Bros. Seed Co.**  
Portland, Ore.  
**Hand Seed Co., Inc., A. M.**  
Portland, Ore.  
(See Adv. on Page 47)

**PENNSYLVANIA**

**Landreth Seed Co., D.**  
Bristol, Pa.  
(See Adv. on Page 3)  
**Garrahan, C. E. (Celery)**  
Kingston, Pa.

**Buist Co., Robert**  
Philadelphia, Pa.  
(See Adv. on Page 95)  
**Burpee Co., W. Atlee**  
Philadelphia, Pa.  
(See Adv. on Page 85)

**TENNESSEE**

**Snapp, J. P. & Sons**  
Limestone, Tenn.

**TEXAS**

**Magnolia Seed Co.**  
Dallas, Texas  
**Nicholson Seed Co., Robert**  
Dallas, Texas

**UTAH**

**Filer Seed Co. (Beans and Peas)**  
Salt Lake City, Utah

**VERMONT**

**Hawkins, Budd D.**  
Reading, Vt.

**VIRGINIA**

**Wood & Sons, T. W.**  
Richmond, Va.  
**State Seed Co.**  
So. Boston, Va.

**WASHINGTON**

**Associated Seed Growers, Inc.**  
Fairfield, Wash.  
(See Adv. on Page 65)  
**Aabling's Seed Farms, Inc.**  
Mount Vernon, Wash.  
**Christianson, Alf**  
Mt. Vernon, Wash.  
(See Adv. on Page 31)  
**Lilly Co., Chas. H.**  
Seattle, Wash.  
(See Adv. on Page 80)  
**Northwest Seed Co.**  
Seattle, Wash.  
**Morrison Bros. Seed Co. (Peas)**  
Spokane, Wash.

**WISCONSIN**

**Rugowski Seed Co., J. K.**  
Manitowoc, Wis.  
**Hansche Bros.**  
Racine, Wis.  
**Wisconsin Cabbage Seed Co.**  
Racine, Wis.  
**Rasmussen, N. A.**  
Sommers, Wis.

**WYOMING**

**Associated Seed Growers, Inc.**  
Powell, Wyoming  
(See Adv. on Page 65)

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(Page Facing Inside Back Cover)

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Anderson & Co., W. H.  
Sydney, Australia  
Brunnings, Pty., Ltd., F. H.  
Melbourne, Australia  
Gill & Searle  
Melbourne, Australia  
Gippsland & Northern Co-op. Co., Ltd.  
Melbourne, Australia  
Law, Somner & Co.  
Melbourne, Australia  
Peterson Bros. & Craig, Ltd.  
Brisbane, Queensland, Australia  
Shepherd & Sons, Ltd.  
Sydney, Australia  
Watters & Son Pty., Ltd.  
Melbourne, Australia  
Yates & Co., Ltd., Arthur  
184 Sussex St., Sydney, N. S. W.,  
Australia

### AUSTRIA

Hernfeld, Adolf (Garden Peas)  
Vienna, Austria

### CANARY ISLANDS

Alonso, Juan P.  
Teneriffe, Canary Islands  
Dorta C. Garcia (Onion Seed)  
Teneriffe, Canary Islands  
(See Adv. on Page 77)  
Fumero, Jose (Onion Seed)  
Teneriffe, Canary Islands  
Prieto, Alberto Varela (Onion Seed)  
Teneriffe, Canary Islands

### CHINA

Manshu Nosan Shokai, Inc.  
Dairen, So. Manchuria, China  
(See Adv. on Page 77)

### CZECHOSLOVAKIA

Bahlsen, Arnost  
Prague, Czechoslovakia  
Grunberger, A. M.  
Trebic, Czechoslovakia  
Kunt, F. A.  
Hradeckralove, Czechoslovakia  
Loewenthal Brothers  
Brno, Czechoslovakia  
Schon, Jacob S., Ltd.  
Brünn, Czechoslovakia  
Vanek, Heinrich  
Prague, Czechoslovakia

### DENMARK

L. Daehnfeldt & Theodor Jensen, Ltd.  
Odense, Denmark  
(See Adv. on Page 55)  
Danish Seed Cultures Co., Inc.  
Kerteminde, Denmark  
Hansen, A. (Cauliflower and Cabbage)  
Kastrup, Amager, Denmark  
(See Adv. on Page 87)  
Hartmann & Co., Hjalmar  
Copenhagen, Denmark  
Helm-Petersen Co., I. C.  
Aarhus, Denmark  
Krogh, A.  
Odense, Denmark  
Ohlsen's Enke, J. E.  
Copenhagen, Denmark  
(See Adv. on Page 55)  
Olsen, Chr. (Cauliflower, Cabbage)  
Odense, Denmark  
(See Adv. on Page 77)  
Ostergaards Froavl  
Stensballe, Horsens, Denmark

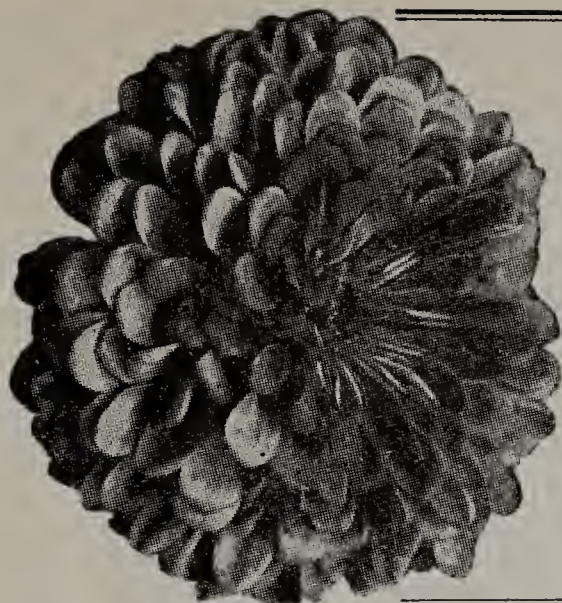
Stallknecht & Meyer  
Copenhagen, Denmark  
Suhr Co., E.  
Copenhagen, Denmark  
(See Adv. on Page 75)

### ENGLAND

Brown & Co., D. T.  
Poulton-Le-Fylde, Lancashire, Eng-  
land  
Bunting & Co., G. A.  
London, W. C. I., England.  
Clucas, Ltd., John L.  
Ormskirk, England  
Cooper, Taber & Co., Ltd.  
London, England  
Cullen & Sons, Thos.  
Witham, England  
Cundy, Chas., & Son  
Sudbury, Suffolk, England  
Daniels, C. S., & Son  
Wymondham, Norfolk, England  
Harrison & Sons  
Leicester, England  
Hurst & Son  
London, England  
Johnson & Son, Ltd., W. W.  
Boston, England  
Kelway & Son (Flower Seeds)  
Langport, Somerset, England  
King & Co., Ltd., E. W.  
Coggeshall, Essex, England  
Nutting & Sons, Ltd.  
London, England  
Pope & Chapman, Ltd.  
Bishops Stortford, England  
Sharpe & Co., Ltd., Chas. (Peas and Tur-  
nip)  
Sleaford, England  
Sutton & Sons  
Reading, England  
Toogood & Sons, Ltd.  
Southampton, England  
Ward & Co.  
Bristol, England  
Watkins & Simpson, Ltd.  
London, England  
Webb & Sons, Ltd., E.  
Stourbridge, England  
Yates & Sons  
Cheltenham, England

### FRANCE

Blain, Felix  
St. Remy-de-Provence, France  
Blanc, Jules  
Jonquieres (Vaucluse), France  
Boret, Victor  
Saumur, France  
Camus & Imbach  
St. Etienne, Angers, France  
Cayeux & LeClerc  
Paris, France  
Chauvet, A.  
Le Thor (Vaucluse), France  
Clause, L.  
Bretigny Sur Orge, Seine et Oise,  
France  
(See Adv. on Page 73)  
Davy  
Juvisy, Seine et Oise, France  
Denaiffe & Fils  
Carignan (Ardennes), France  
Desbois, A.  
Brain Sur l'Authion, France  
Floriculture Hasslach  
Avignon, France  
Fontaine, G.  
Bourg Achard (Eure), France  
Garcin, L. Bernard  
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Lyon-Villeurbanne, France  
Moreau Freres  
Brain Sur l'Authion, France  
Picard & Co., A.  
Orleans, France  
Pucel, Jules  
Cambrai (Nord), France  
Robert & Holder  
Brain Sur l'Authion, France  
Robineau & Francois  
La Pyramide-Trelaze (M. & L.),  
France  
E. de Rougemont  
St. Remy-de-Provence, France  
Roumanille Freres  
St. Remy-de-Provence, France  
Simon Louis Freres & Cie  
Bruyeres-le-Chatel (S. & O.), France  
Tezier Freres  
Valence-Sur-Rhone, France  
Vilmorin Andrieux & Co.  
Paris, France

## GERMANY

Beck & Co., Carl  
Quedlinburg, Germany  
Benary, Ernst  
Erfurt, Germany  
(See Adv. on Page 54)  
Bitterhoffsohn, August  
Berlin, Germany  
Deuber, Jr., Joh. Nacht.  
Bamberg, Germany  
Fischer, Ferdinand  
Wiesbaden-Aukamm, Germany  
Gebruder, Dippe, A. G.  
Quedlinburg, Germany  
Haage, Franz Anton  
Erfurt, Germany  
Haage & Schmidt  
Erfurt, Germany  
Haubner, August  
Eisleben, Germany  
Heinemann, F. C.  
Erfurt, Germany  
Hesse & Sohn, Robt.  
Rieder, Quedlinburg, Germany  
Hofmann, Joh. Thomas  
Nurnberg, Germany  
Just, Otto  
Aschersleben, Germany  
Mann, Otto  
Leipzig-Eutritzsch, Germany  
Mette, Heine  
Quedlinburg, Germany  
Mohrenweiser, Chr.  
Altenweddingen, Germany  
Noth, Johs, Jr.  
Fischbach (Gotha), Germany  
Pabst, Karl  
Erfurt, Germany  
Philipp & Co., H. O.  
Hamburg, Germany  
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Sachs, David  
Quedlinburg, Germany  
Schmidt, J. C.  
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Terra, A. G.  
Aschersleben, Germany  
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Dekker, Jac.  
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Rood & Zoon, P.  
Bovenkarspel, Holland  
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Lisse, Holland  
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Fekete Brothers  
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Hungarian Seed Culture Co., Ltd.  
Budapest, Hungary  
(See Adv. on Page 55)  
Mauthner, Ltd., Edmund  
Budapest, Hungary  
"Selecta" Seed Growing Co., Ltd.  
Budapest, Hungary

## INDIA

American Seed & Nursery Co.  
Lahore, India.  
Pocha & Sons, Pestonjee P.  
Poona, India  
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Maymyo, Burma, India

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Bulleri, Francesco  
Scafati (Salerno), Italy  
Carmine Faraone Mennella  
Torre Del Greco (Near Naples), Italy  
(See Adv. on Page 79)  
Ditta, D'Anna Francesco  
San Giovanni A Teduccio, Italy  
(See Adv. on Page 77)  
Herb, M.  
Naples, Italy  
Ingegnoli, Sigg Fratelli  
Milan, Italy  
Sgaravatti Fratelli-Sementi  
Padova, Italy

## JAPAN

Mitsui & Co., Ltd.  
Tokyo, Japan  
Sakata & Co., T.  
Yokohama, Japan  
(See Adv. on Page 34)  
Sapporo Seed Farm  
Sapporo, Japan  
Takii & Co.  
Kyoto, Japan  
(See Adv. on Page 63)  
Tokyo Konoen, Ltd.  
Shibuya, Tokyo, Japan  
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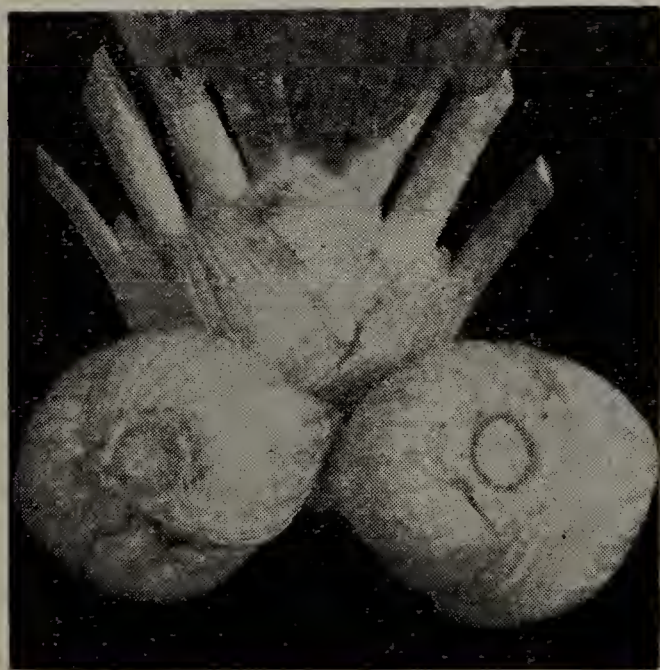
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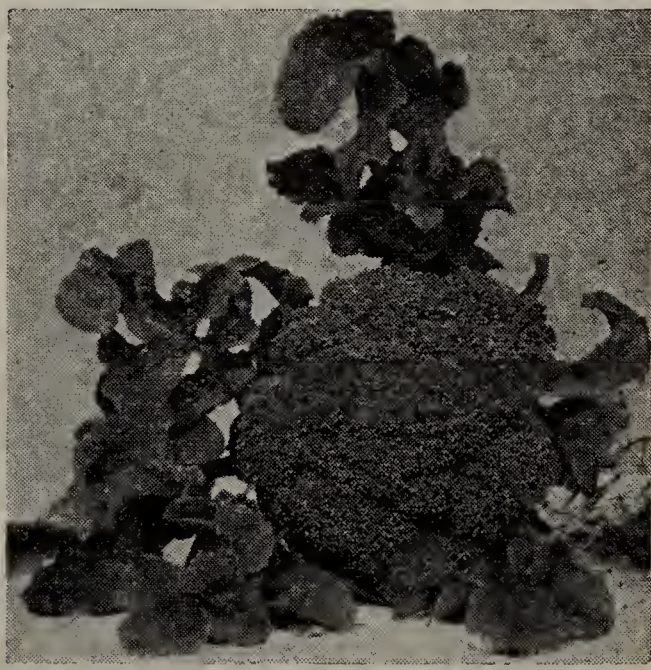
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Herlofsen's Frohandel  
Oslo, Norway  
A. S. Norsk Fro.  
Oslo, Norway  
Olsen's Enke A/S, J.  
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## PORTO RICO

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Arecibo, P. R.

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Leith, Scotland  
Cross Seed Co., Ltd., Alexander  
Glasgow, Scotland  
Dobbie & Co.  
Edinburgh, Scotland  
Lawson & Son, Ltd., Peter  
Edinburgh, Scotland

## SWEDEN

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Helsingborg, Sweden  
Gehlins Frohandel, A. B.  
Malmo, Sweden  
Goteborgs Tradgardsforening  
Gothenburg, Sweden  
Holmberg & Son, Aktiebolaget, Algot  
Norrkoping, Sweden  
Ohlsens Enke A/B, J. E.  
Malmo, Sweden  
Weibull Aktiebolaget, W.  
Landskrona, Sweden

## SWITZERLAND

Haubensak Sons, Fr.  
Basel, Switzerland  
Mauser, Emil  
Zurich, Switzerland  
Muller & Cie  
Zurich, Switzerland

## PUGET SOUND GROWN SEED

Our thirty years'  
experience in this  
line should mean  
something to you.

# LILLY'S

Established 1885

We are proud of  
the part we had in  
pioneering the  
growing of seeds in  
the Northwest.

### Growers

CABBAGE «» BEET «» TURNIP  
PARSNIP «» KALE «» RUTABAGA  
MUSTARD «» CHARD «» MANGEL

### Shippers

FIELD PEAS «» VETCHES «» CLOVERS  
RYE GRASSES «» BENT GRASSES, ETC.

**THE CHAS. H. LILLY CO.**  
SEATTLE, WASHINGTON, U. S. A.



Let SEED WORLD Service Bureau help you.  
No charge. Just write us and we will do the rest.  
SEED WORLD, 325 W. Huron St., Chicago

Since 1875

# Radway's

## TESTED SEEDS

"HEADQUARTERS"  
COOS SEASIDE AND  
ASTORIA BENT

VELVET BENT      GERMAN BENT  
COLONIAL BENT  
PRINCE EDWARD ISLAND BENT  
FESCUES — POA TRIVIALIS  
ALSO BIRD SEEDS

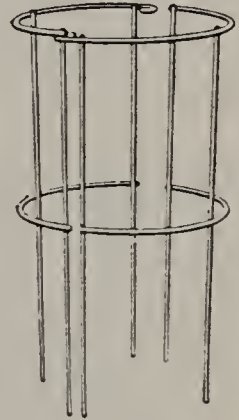
Ask for Sample Offer

**I. L. RADWANER**  
SEED COMPANY, Inc.  
115 BROAD ST.      NEW YORK

## POPULAR GARDEN ACCESSORIES

### INTERCHANGEABLE PLANT SUPPORTS

Made of steel wire, electric welded. Built in halves. Hooked together to form rigid plant support. Halves can be used separately for foliage in house borders. Is easily shaped by hand to support any particular bush or flower.

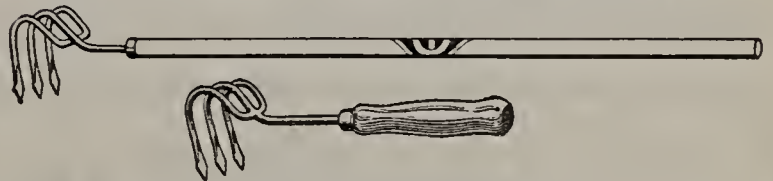


### ONE AND TWO-EYED STAKES

Always a good demand for these simple, efficient stakes. Wired in bundles of 50 pieces. Should straight stakes be desired, ask for prices. We can furnish any length or size wire.



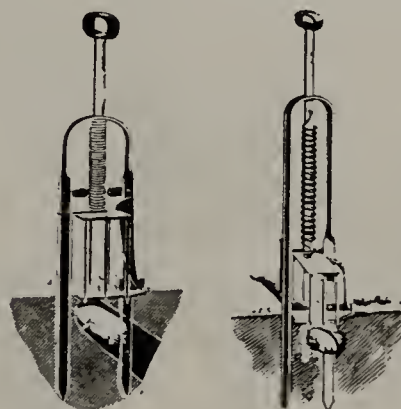
### EXTRA HEAVY ALL STEEL WEEDERS



With short and long handle, this weeder is made of heavy steel wire, electric welded, double tinned throughout and rust proof, with natural finish 6½ in. and 36 in. wood handle.

We assure you there are none better.

### REDDICK AND LITTLE GIANT MOLE TRAPS



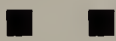
No mole can pass under these traps and live. Kill the mole, because they have destroyed annually millions of dollars worth of crops. These

two traps are the best means of accomplishing this, and if properly displayed in your catalog will bring the demand because they are well known as an easily operated, dependable Mole Trap. Write for details.

**MICHIGAN WIRE GOODS CO.**  
NILES      ::      MICHIGAN



**Wm. H. Jacques**  
PRESCOTT, WIS.



**Northern Grown, High Vitality, Early Maturing, Disease Resistant Sweet Corn**



**ALL STANDARD MEDIUM AND EARLY VARIETIES  
CERTIFIED FIELD CORN**

## GROWERS FLOWER SEEDS

### CALIFORNIA

**Bodger Seeds, Ltd. (Asters, Zinnias)**  
El Monte, Los Angeles County, Calif.  
(See Adv. Below)

**Pieters-Wheeler Seed Co.**  
Gilroy, Calif.  
(See Adv. on Page 21)

**Rohnert, Waldo (Sweet Peas)**  
Gilroy, Calif.  
(See Adv. on Page 83)

**Waller-Franklin Seed Co.**  
Guadalupe, Calif.  
(See Adv. on Page 83)

**Zvolanek, Ant. C. (Sweet Peas)**  
Lompoc, Calif.

**Aggeler & Musser Seed Co.**  
Los Angeles, Calif.

**Germain Seed & Plant Co.**  
Los Angeles, Calif.  
(See Adv. on Page 145)

**Diener Co., Inc., Richard**  
Oxnard, Calif.  
(See Adv. on Page 5)

**Ferry-Morse Seed Co. (Sweet Peas)**  
San Francisco, Calif.  
(See Adv. on Page 70)

**Braslan Seed Growers Co., Inc.**  
San Jose, Calif.  
(See Adv. on Page 73)

**Kimberlin Seed Co.**  
San Jose, Calif.

**MacDonald Seed Co., The Wm.**  
Santa Maria, Calif.  
(See Adv. on Page 85)

### CANADA

**Steele, Briggs Seed Co., Ltd.**  
Toronto, Canada  
(See Adv. on Page 26)

**Sunset Seed Co., Ltd.**  
Victoria, B. C., Canada

### COLORADO

**Colorado Seed Co. (Evergreen Tree Seed and Columbines)**

Denver, Colo.

**Rocky Mountain Seed Co.**  
Denver, Colo.

**Grand Junction Seed Co. (Zinnias)**  
Grand Junction, Colo.

(See Adv. on Page 39)

**Burrell Seed Growers Co.**  
Rocky Ford, Colo.

### CONNECTICUT

**Comstock, Ferre & Co.**  
Wethersfield, Conn.  
(See Adv. on Page 31)

### FLORIDA

**Zangen, O. V.**  
Davenport, Fla.

### GEORGIA

**Hastings, H. G., Co.**  
Atlanta, Ga.

### IDAHO

**Woodacres, Fred B. Wood**  
Boise, Idaho



## Bodger Seeds, Ltd.

*Originators of*

### Prize Winning Strains

NASTURTIUM GOLDEN  
GLEAM

ASTER, Famous American  
Types

ASTER, Wilt Resistant Strains  
ZINNIA, Bodgers Gold Medal  
Dahlia Flowered

LARKSPUR, Giant Imperial  
Carmine King and Miss Cali-  
fornia

PETUNIA, Dwarf Giants of  
California Ramona

POPPY, Nudicaule El Monte

## BODGER SEEDS, LTD.

EL MONTE      Los Angeles County      CALIFORNIA

*California's Choicest Flower Seeds—Since 1890*

WHOLESALE  
• SEED •  
GROWER

# Specialties

FORTY YEARS  
OF  
SEED GROWING

CONTRACT PRICES  
FOR CROP 1933  
MAILED ON  
APPLICATION

B E E T M U S T A R D  
C H A R D O N I O N  
C A R R O T P A R S L E Y  
C E L E R Y P A R S N I P  
E N D I V E R A D I S H  
L E T T U C E S A L S I F Y  
M I X E D S W E E T P E A S

W A L D O R O H N E R T  
G I L R O Y , C A L I F .

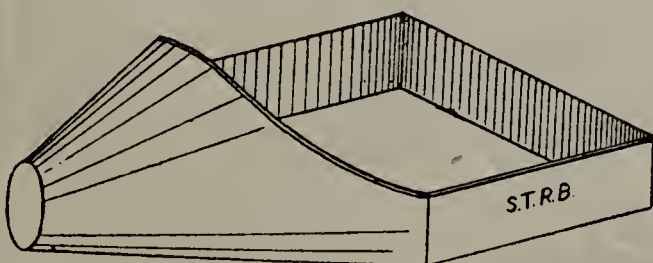
## "THE WORLD'S BEST DOUBLE STOCKS"

We received five "Awards of Merit" and eight "Highly Commended" for our strains of Ten Week, Giant Imperial, Beauty of Nice and Perpetual Branching Stocks at the "Trial of Stocks" conducted by The Royal Horticultural Society of Great Britain, at Wisley, England, season 1932.

### WALLER-FRANKLIN SEED CO.

Wholesale Growers—Annual and Perennial Flower Seeds

Guadalupe, California



### SEED AND GRAIN SAMPLE PANS

For containing grain or seed after sampling. Advantageous in making analyses and for display. Seamless.

Wellsville steel—dark blue and non-glaring.

No. 31—12x16x2 in.—3 qts. wheat capacity. Price each, \$1.50; half dozen, \$8.50.

No. 32—8½x12x1½ in.—1½ qts. wheat capacity. Price each, \$1.25; half dozen, \$7.00.

No. 33—Same as No. 32, Aluminum, \$1.50.

### SEED TRADE REPORTING BUREAU

325 West Huron Street  
CHICAGO, ILL.

## GROWERS FLOWER SEEDS—Continued

## ILLINOIS

American Bulb Company  
Chicago, Ill.  
(See Adv. on Page 38)

Barnard Co., W. W.  
Chicago, Ill.  
Vaughan's Seed Store  
Chicago, Ill.  
Condon Bros. Seedsmen  
Rockford, Ill.

## MICHIGAN

Gebruder Dippe, A. G.  
Birmingham, Mich.

## NEW JERSEY

Forbes & Co., Alex  
Newark, N. J.

## NEW YORK

Cowee, Arthur  
Berlin, N. Y.  
Page Seed Co.  
Greene, N. Y.  
(See Adv. on Page 45)

Herbst Bros.  
New York, N. Y.  
(See Adv. on Page 34)

Stumpp & Walter Co.  
New York, N. Y.  
Vaughan's Seed Store  
New York, N. Y.

## NORTH DAKOTA

Will & Co., Oscar H.  
Bismarck, N. D.

## OHIO

Holmes Seed Co., The  
Canton, Ohio

McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
(See Adv. on Page 15)

## OREGON

Ellis, Mrs. Merton G. (Pansy)  
Canby, Ore.  
Steele's Pansy Gardens (Pansy)  
Portland, Ore.  
Hood Acres  
Troutdale, Ore.

## PENNSYLVANIA

Landreth Seed Co., D.  
Bristol, Pa.  
(See Adv. on Page 3)  
Burpee Co., W. Atlee  
Philadelphia, Pa.  
(See Adv. on Page 85)

## TEXAS

Nicholson Seed Co., Robt.  
Dallas, Texas

## VERMONT

Hawkins, Budd D.  
Reading, Vt.

## WISCONSIN

Toole, W. A.  
Baraboo, Wis.  
Rugowski Seed Co., J. K.  
Manitowoc, Wis.  
Jung Seed Co., J. W.  
Randolph, Wis.

# Standard Seed Farms Company

## WHOLESALE GROWERS GARDEN SEEDS

### Stockton California

BEET

CARROT

CELERY

ENDIVE

LETTUCE

MUSTARD

ONION

PARSLEY

PARSNIP

RADISH

SALSIFY

SWEET PEAS

SWISS CHARD

Cable Address  
"Stanseed"

Post Office  
Box 577



Specializing in Stocks

## FLOWER SEEDS

### California's Best

Antirrhinum  
Calendula  
Cosmos

Larkspur  
Marigold African  
Petunia Giants

Sweet Peas and  
Florists' Strains

*Our Stocks have received 12 awards  
from the Royal Horticultural Society*

**WM. MACDONALD SEED CO.**

Exclusive Flower Seed Growers

SANTA MARIA

CALIFORNIA

## BURPEE'S NEW GOLD MEDAL SWEET PEA

### LADY RUFFLES

*Summer Flowering*

*Winner of the Gold Medal, Scottish National  
Sweet Pea Society*

A beautiful soft pink on a white ground. The warm glow of color runs well down to the base of the standard and wings. Extremely strong growing, with four large, ruffled flowers on stout stems. Last well when cut. A lovely addition to our ruffled class. *Packet of 20 seeds to retail for 25c. \$12.50 for 100 packets; \$100.00 for 1,000 packets.*

#### *Burpee's Sweet Pea AMBITION*

*Award of Merit and Gold Medal, National  
Sweet Pea Society of Great Britain*

A NEW lavender, perfectly distinct, with a darker shade on the base of the standard and wings when young. Has all the points of a first class pea. A great improvement over Powerscourt. *Packet of 30 seeds to retail for 25c. \$10.00 for 100 packets; \$90.00 for 1,000 packets.*

#### *Burpee's Sweet Pea FLORADALE*

*Award of Merit, National Sweet Pea Society  
of Great Britain*

A NEW salmon-pink on a cream ground. Long strong stems each bearing four very large frilled blooms, many exquisitely duplexed. *Packet of 30 seeds to retail for 25c. \$10.00 for 100 packets; \$90.00 for 1,000 packets.*



LADY  
RUFFLES

*Awarded Gold Medal  
Scottish National Sweet Pea Society*

*ELECTROS Supplied Free. Write for Wholesale List of Burpee's Seeds*

**W. ATLEE BURPEE CO., 726 Burpee Bldg. PHILADELPHIA**

**WHAT MERCHANDISE**

**CAN THE SEED DEALER**

**HANDLE PROFITABLY?**

**Ask Seed World Service Dept.**

**325 W. Huron St., Chicago**

## FOREIGN FLOWER SEEDS

### AUSTRALIA

Anderson & Co., Ltd., Seedsmen  
Sydney, N. S. W., Australia  
Bunnings, Pty, Ltd., F. H.  
Melbourne, Australia  
Gill & Searle  
Melbourne, Australia  
Yates & Co., Ltd., Arthur  
Sydney, N. S. W., Australia

### CANARY ISLANDS

Wildpret Bros.  
Port Orotava, Teneriffe, Canary Islands

### CHINA

Manshu Nosan Shokai, Inc.  
Dairen, So. Manchuria, China  
(See Adv. on Page 77)

### DENMARK

L. Daehufeldt & Theodor Jensen, Ltd.  
Odense, Denmark  
(See Adv. on Page 55)  
Ohlsen's Enke, J. E.  
Copenhagen, Denmark  
(See Adv. on Page 55)

### ENGLAND

Bunting & Co., G. A.  
London, W. C. I., England  
Cooper, Taber & Co., Ltd.  
London, England  
Harrison & Sons  
Leicester, England  
Hurst & Son  
London, England  
Kelway & Son  
Langport, England  
King & Co., Ltd., E. W.  
Coggeshall, Essex, England  
Sharpe & Co., Ltd., Chas.  
Sleaford, England  
Stuart & Co.  
London, England  
Sutton & Sons  
Reading, England  
Toogood & Sons, Ltd.  
Southampton, England  
Watkins & Simpson, Ltd.  
London, England  
Webb & Sons, Ltd., E.  
Stourbridge, England

### FRANCE

Barbier & Fils, P. A.  
St. Remy-de-Provence, France  
Cayeux & Le Clerc  
Paris, France  
Clause, L.  
Bretigny-Sur-Orge, Seine et Oise,  
France  
(See Adv. on Page 73)  
Honora Roumanille & Fils  
St. Remy-de-Provence, France  
Huber & Co., Ch.  
Hyeres-les-Palmiers, France  
Joyeuse, Villa  
Juan-les-Pins, Alp. Mar, France  
Perrin, Louis  
St. Remy-de-Provence, France  
Rachet Freres  
St. Remy-de-Provence, France  
Rivoire Pere & Fils  
Lyon, France  
Roumanille Lafayette Pere & Fils  
St. Remy-de-Provence, France  
Roustan Servan & Cie  
St. Remy-de-Provence, France  
Simon Louis Freres & Cie  
Bruyeres-le-Chatel (S. & O.), France  
Tezier Freres  
Valence-Sur-Rhone, France  
Vilmorin Andrieux & Co.  
Paris, France

### GERMANY

Beck & Co., Carl  
Quedlinburg, Germany  
Benary, Ernst  
Erfurt, Germany  
(See Adv. on Page 54)

Binnewics, E. (Cyclamen)  
Alfeld, Germany  
Bitterhoffsohn, August  
Berlin, Germany  
Dippe Gebruder, A. G.  
Quedlinburg, Germany  
Drede, H. (Pansy)  
Lueneburg, Germany  
Fischer, Ferdinand  
Wiesbaden-Aukmamm, Germany  
Haage, Franz Anton  
Erfurt, Germany  
Haage & Schmidt  
Erfurt, Germany  
Haubner, August  
Eisleben, Germany  
Heinemann, F. C.  
Erfurt, Germany  
Hesse & Sohn, Robt.  
Rieder Quedlinburg, Germany  
Mehlert, C.  
Halberstadt, Germany  
Mette, Heinr.  
Quedlinburg, Germany  
Muller, Heinrich  
Neu Dietendorf, Germany  
Pape & Bergmann  
Quedlinburg, Germany  
Roemer, F.  
Quedlinburg, Germany  
Sachs, David  
Quedlinburg, Germany  
Teicher, Paul  
Striegau, Germany  
Weigett & Co.  
Erfurt, Germany  
Zacharias, Paul  
Ermsleben, Germany

### HOLLAND

Rood & Zoon, P.  
Bovenkarspel, Holland  
Sluis Bros., Ltd.  
Enkhuizen, Holland  
Sluis & Groot's Zaadteelt & Zaadhandel  
Enkhuizen, Holland  
Vis Bros.  
Enkhuizen, Holland

### HUNGARY

Hungarian Seed Culture Co., Ltd.  
Budapest, Hungary  
(See Adv. on Page 55)

### INDIA

Ghose & Co., G.  
Darjeeling, India

### ITALY

Bulleri, Francesco  
Scafati, Italy  
Carmine Faraone Mennella  
Torre Del Greco (Near Naples), Italy  
(See Adv. on Page 79)  
Ditta, D'Anna Francesco  
San Giovanni A Teduccio, Italy  
(See Adv. on Page 77)  
Herb, M.  
Naples, Italy

### JAPAN

Fuji-Enzeijyo & Co.  
Tokiwa, Naraken, Japan  
Sakata & Co., T.  
Yokohama, Japan  
(See Adv. on Page 34)  
Takii & Co., Ltd.  
Kyoto, Japan  
(See Adv. on Page 63)  
Tokyo Konoen, Ltd.  
Shibuya, Tokyo, Japan

### SCOTLAND

Dobbie & Co.  
Edinburgh, Scotland

### SWITZERLAND

Correvon, H.  
Chene Bourg, Geneva, Switzerland  
Haubensak Sons, Fr.  
Basel, Switzerland

# Cauliflower Seed



# Cabbage Seed

**A. Hansen**

**1873** KASTRUP  
AMAGER  
DENMARK **1933**

*Specialist—Grower Since 1873*

# Polish Seeds Good Seeds "Nasiona" Seeds Better Seeds

If you are interested for  
Polish Grown White  
Clover, Red Clover,  
Vicia Villosa, etc.,  
please ask us for offers.

**"Nasiona" — Danzig**

Cable Address—"Nasiona"



**A. S. PATERSON & COY, Ltd.**

**DUNEDIN, NEW ZEALAND**

Established 1890

Cable Address "ASPASIA"

## EXPORTERS OF ALL KINDS OF FIELD SEEDS

**Brown Top (Colonial Bent) (Gov't. Certified)**

**Ryegrass**

**Chewings Fescue**

**Rescue Grass**

**Crested Dogstail**

**Clovers**

**Garden and Field Peas, etc.**

**Horse Beans**



## SAVE TIME AND MONEY

by using these seed germination pads. They can conveniently be used  
in any make of machine. The size of the pads are 3x3 inches, each having  
100 indentations.

### Why Count the Seeds?

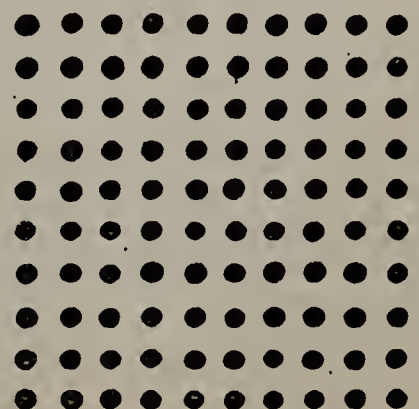
The indentations of these pads are correct for average size seeds such as  
Red Clover and all seeds of similar size. If it is desirable to have a  
blotter pad on top, they can be used to advantage in that way. Orders  
for thousands of these pads have already been received.

## SEEDBURO QUALITY

The cost is reasonable. Samples and prices on request.

**The Seed Trade Reporting Bureau**

325 W. Huron Street, Chicago.



# BULBS, PLANTS AND MISCELLANEOUS SEEDS

## BULBS—AMERICAN DEALERS

Aggeler & Musser Seed Co.  
Los Angeles, Calif.  
Alexander, J. K.  
E. Bridgewater, Mass.  
**American Bulb Co.**  
Chicago, Ill.  
(See Adv. on Page 38)  
American Rose & Plant Co.  
Springfield, Ohio  
Barnard Co., The W. W.  
Chicago, Ill.  
Barteldes Seed Co.  
Lawrence, Kans.  
**Bodger Seeds, Ltd.**  
El Monte, Los Angeles County, Calif.  
(See Adv. on Page 82)  
Brown Bulb Ranch  
Capitola, Calif.  
Bruce & Co., Ltd., John A.  
Hamilton, Canada  
Buchanan Seed Company, R. B.  
Memphis, Tenn.  
**Buist Co., Robert**  
Philadelphia, Pa.  
(See Adv. on Page 95)  
**Burpee Co., W. Atlee**  
Philadelphia, Pa.  
(See Adv. on Page 85)  
Bushy Flower Gardens  
Wake, Va.  
Carolina Fruit Co.  
Rose Hill, N. C.  
**Corneli Seed Co.**  
St. Louis, Mo.  
(See Adv. on Page 17)  
Croom & Bro., John F.  
Magnolia, N. C.  
Cumberland Valley Nursery Co., Inc.  
McMinnville, Tenn.  
Dreer, Henry A.  
Philadelphia, Pa.  
Ellis Bulb Gardens, Merton G.  
Canby, Ore.  
Enid Floral Co.  
Enid, Okla.  
Forbes & Co., Alex.  
Newark, N. J.  
Fussell, J. B.  
Rose Hill, N. C.  
Gelser Bros.  
Dalton, N. Y.  
General Bulb Co.  
Chicago, Ill.  
Gibbs, W. Thurston  
Morocco, Ind.  
Gill Bros. Seed Co. (Dahlia)  
Portland, Ore.  
Goodhold Floral Gardens  
Mentor, Ohio  
**Grootendorst, A. M.**  
Benton Harbor, Mich.  
Hastings Co., H. G.  
Atlanta, Ga.  
Henderson & Co., Peter  
New York City, N. Y.  
Holland-American Seed Co.  
Grand Rapids, Mich.  
Humphrey, John B.  
Petaskala, Ohio  
Hyde Co., H. A.  
Watsonville, Calif.  
Imperial Gardens  
Sugarland, Texas  
Ireland, Z. Jay  
Pleasant Valley, N. Y.  
Kunderd, A. E. (Gladiola)  
Goshen, Ind.  
Larson, Leonard C.  
Portland, Ore.  
Lawler, George  
Tacoma, Wash.  
**Leonard Seed Co.**  
Chicago, Ill.  
(See Adv. on Third Cover)

Locust Valley Dahlia Farm  
Cold Springs Harbor, L. I., N. Y.  
Long, J. D.  
Boulder, Colo.  
Long, W. P.  
West Grove, Pa.  
**McCullough's Sons Co., J. M.**  
Cincinnati, Ohio  
(See Adv. on Page 27)  
McHutchison & Co.  
New York, N. Y.  
Main, Arthur B.  
Santa Cruz, Calif.  
Meyer Seed Company  
Baltimore, Md.  
**Mount Arbor Nurseries**  
Shenandoah, Iowa  
(See Adv. on Page 90)  
Never Idle Gardens, Inc.  
Davenport, Fla.  
North Star Nursery  
Onarga, Ill.  
Pinner & Co., Inc.  
Suffolk, Va.  
Puget Sound Seed Co.  
La Conner, Wash.  
Quality Seed & Bulb Co.  
Chicago, Ill.  
Rugowski Seed Co., J. K.  
Manitowoc, Wis.  
Rynveld & Sons, F.  
New York City, N. Y.  
Schell, Inc., Walter S.  
Harrisburg, Pa.  
Schling Seedsmen, Inc., Max  
New York, N. Y.  
Schwake & Co., Inc., Chas.  
New York, N. Y.  
Scott Co., I. W.  
Pittsburgh, Pa.  
**St. Louis Seed Co.**  
St. Louis, Mo.  
(See Adv. on Page 59)  
State Nursery & Seed Co.  
Helena, Mont.  
Stumpp & Walter Co.  
New York City, N. Y.  
Swedberg Bros. Nurseries  
Battle Lake, Minn.  
Templin-Bradley Co.  
Cleveland, Ohio  
United Bulb Growers, Inc.  
New York City, N. Y.  
Van Antwerp Seed Co.  
Mobile, Ala.  
Van Zanten Bros., Inc.  
Lynden, Wash.  
Van Zonneveld Bros. & Philippo  
New York City, N. Y.  
Vaughan's Seed Store  
Chicago, Ill.  
Vos & Son, P.  
Grand Rapids, Mich.  
White Seed Co., Buxton  
Elizabeth City, N. C.  
Younkerman Seed Co.  
Council Bluffs, Iowa  
Zangen, O. V.  
Davenport, Fla.

## BULBS—FOREIGN DEALERS

### FRANCE

Blain, Felix  
St. Remy-de-Provence, France  
Lemaire & Julien  
Paris, France

### GERMANY

Berham, Chr.  
Stendal, Germany  
**Benary, Ernst**  
Erfurt, Germany  
(See Adv. on Page 54)  
Chehler, Carl  
Halberstadt, Germany

## BULBS, PLANTS AND MISCELLANEOUS SEEDS—Continued

## Bulbs—Continued

Haage & Schmidt  
Erfurt, Germany  
Heinemann, F. C.  
Erfurt, Germany  
Hesse & Sohn, Rob.  
Rieder am Hacz, Germany  
Kaiser, Ferdinand  
Eisleben, Germany  
Klisning Sohn, C. L.  
Barth, Germany  
Leib, Wilhelm  
Arnstadt, Germany  
Lieban & Co.  
Erfurt, Germany  
Lorenz, Chr.  
Erfurt, Germany  
**Manshu Nosan Shokai, Inc.**  
Dairen, So. Manchuria, China  
(See Adv. on Page 77)  
Pabst, Carl  
Erfurt, Germany  
Pape & Bergmann  
Quedlinberg, Germany  
Pflzer, Wilhelm  
Stuttgart, Germany  
Putz, Otto  
Erfurt, Germany  
Reine, Schoo & Co.  
Fornosch-Holstein, Germany  
Roemer, Friedrich  
Quedlinberg, Germany  
Schraeder, C. G.  
Saltwedel, Germany  
Stenger & Rotter  
Erfurt, Germany  
Wehranpfannig, A.  
Quedlinberg, Germany  
Wiegelt & Co.  
Erfurt, Germany

## HOLLAND

Byvoet Bros.  
Overeen, Haarlem, Holland  
De Graaf Bros.  
Noordwyk, Holland  
De Graaf & Sons, H.  
Lisse, Holland  
Eldering & Son, W. J.  
Overeen, Holland  
Grullemans & Sons, J. J.  
Lisse, Holland  
Jonkheer & Sons, C.  
Hillegom, Holland  
Segers Brothers  
Lisse, Holland  
Segers, Gerrit  
Lisse, Holland  
Steelman & Sons, C. J.  
Sassenheim, Holland  
Straathof, L. H.  
Hillegom, Holland  
Tegelaar Bros.  
Lisse, Holland  
Van Der Schoot, R. A.  
Hillegom, Holland  
Van Der Veld, George  
Lisse, Holland  
Van Waveren Stamhois Nurseries  
Hillegom, Holland

## JAPAN

Bunting & Co., Isaac  
Yokohama, Japan  
**Sakata & Co., T.**  
Yokohama, Japan  
(See Adv. on Page 34)

## SWEDEN

Holmberg, Algot & Son  
Norrkoping, Sweden

## NURSERY STOCK

Bohlender Sons, Peter  
Tippecanoe City, Ohio  
Clinton Falls Seed & Nursery Co.  
Owatonna, Minn.  
Cutler & Downing Co.  
Benton Harbor, Mich.  
Elliott, Ltd., Clarence  
Stevenage, Herts, England  
Ernst Nurseries  
Eaton, Ohio  
Forest Nursery Co.  
McMinnville, Tenn.  
Gardens of the Blue Ridge  
Ashford, No. Carolina  
Harmel Peony Co.  
Berlin, Md.  
Harmon Nursery  
Prospect, Ohio  
Hill Nursery, D., The  
Dundee, Ill.  
Jackson & Perkins Co.  
Newark, N. Y.  
**Mount Arbor Nurseries**  
Shenandoah, Iowa  
(See Adv. on Page 90)  
Naperville Nurseries  
Naperville, Ill.  
North-Eastern Forestry Co., The  
Cheshire, Conn.  
Northfield Seed & Nursery Co.  
Northfield, Minn.  
Onarga Nursery Co.  
Onarga, Ill.  
Piedmont Forestry Co.  
Bound Brook, N. J.  
Rice Nurseries, T. W.  
Geneva, N. Y.  
Shenandoah Nurseries  
Shenandoah, Iowa  
Smith Co., W. & T.  
Geneva, N. Y.  
Sonderegger Nurseries & Seed House  
Beatrice, Nebr.  
State Nursery & Seed Co.  
Helena, Mont.  
Storrs & Harrison Co.  
Painesville, Ohio  
Washington Nursery Co.  
Toppenish, Wash.  
Weaver Gardens Co., The  
Wichita, Kans.  
Westminster Nurseries, The  
Westminster, Md.  
Willadean Nurseries, Inc.  
Sparta, Ky.  
Willis Nursery Co., The  
Ottawa, Kan.  
Wilson & Co., Inc., C. E.  
Manchester, Conn.

## CACTI

Clark, Mrs. Fred  
Van Horn, Texas  
Consolidated Displays, Inc.  
Chicago, Ill.  
Desert Plant Co.  
El Paso, Texas  
Schroeder, T. R.  
Chicago, Ill.

## EVERGREENS

Appalachian Evergreen Co.  
Doeville, Tenn.  
Boney Bros. (Holly and Mistletoe)  
Rose Hill, N. C.  
Carolina Evergreen Co.  
Rose Hill, N. C.  
Conwell, Inc., H. Ernest  
Milton, Dela.  
Cumberland Valley Nursery Co., Inc.  
McMinnville, Tenn.  
Jackson & Perkins Co.  
Newark, N. Y.

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You can handle NURSERY STOCK safely and profitably—without any of the heretofore dangers from drying out, root-breakage or over-stocking.

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TO  
GROW**

The  
**Better**  
Plant  
Products



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E. S. WELCH, President

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*"One of Americas Foremost Nurseries"*

**BULBS, PLANTS AND MISCELLANEOUS SEEDS—Continued****Evergreens—Continued****Mount Arbor Nurseries****Shenandoah, Iowa**

(See Adv. on Page 90)

Naperville Nurseries

Naperville, Ill.

North-Eastern Forestry Co.

Cheshire, Conn.

Rosebank Nursery Co.

Huntsville, Ala.

State Nursery &amp; Seed Co.

Helena, Mont.

Swedberg Bros. Nurseries

Battle Lake, Minn.

**FERNS**

Ferndale Nursery

Askov, Minn.

**FRUIT TREES**

Cumberland Valley Nursery Co., Inc.

McMinnville, Tenn.

Jackson &amp; Perkins Co.

Newark, N. Y.

May Seed &amp; Nursery Co.

Shenandoah, Iowa

**Mount Arbor Nurseries****Shenandoah, Iowa**

(See Adv. on Page 90)

Potter Sales Nursery Co.

McMinnville, Tenn.

Rosebank Nursery Co.

Huntsville, Ala.

Smithville Nursery Co.

Smithville, Tenn.

**FRUIT—SMALL**

Bauer Plant Co., J. A. (Strawberry)

Judsonia, Ark.

Cumberland Valley Nursery Co., Inc.

McMinnville, Tenn.

**Mount Arbor Nurseries****Shenandoah, Iowa**

(See Adv. on Page 90)

Schifferli &amp; Son Nurseries, The F. E.

Fredonia, N. Y.

Thomas, W. W. (Strawberry)

Anna, Ill.

**GRAPE VINES****Mount Arbor Nurseries****Shenandoah, Iowa**

(See Adv. on Page 90)

Munson Nurseries

Denison, Texas

**ORNAMENTALS**

Brainard's Nurseries &amp; Greenhouses, Inc.

Des Moines, Iowa

Cumberland Valley Nursery Co., Inc.

McMinnville, Tenn.

Jackson &amp; Perkins Co.

Newark, N. Y.

**Mount Arbor Nurseries****Shenandoah, Iowa**

(See Adv. on Page 90)

Naperville Nurseries

Naperville, Ill.

Wilson &amp; Co., C. E.

Manchester, Conn.

**PERENNIALS**

Cottage Gardens, The (Peonies)

Lansing, Mich.

Locust Valley Dahlia Farms

Cold Springs Harbor, L. I., N. Y.

Jackson &amp; Perkins Co.

Newark, N. Y.

**Mount Arbor Nurseries****Shenandoah, Iowa**

(See Adv. on Page 90)

Naperville Nurseries

Naperville, Ill.

Wilson &amp; Co., C. E.

Manchester, Conn.

**ROSE BUSHES**

Howard Rose Co., Inc.

Hemet, Calif.

Jackson &amp; Perkins Co. ✓

Newark, N. Y.

**Mount Arbor Nurseries****Shenandoah, Iowa**

(See Adv. on Page 90)

Wilson Co., C. E.

Manchester, Conn. ✓

**WATER PLANTS**

Aquatic Plant Nursery

New Orleans, La.

Beldt's Aquarium

St. Louis, Mo.

**Lakeview Ponds, The****Mt. Airy, Cincinnati, Ohio****Pacific Goldfish Farm****Westminster, Calif.**

(See Adv. on Page 130)

Terrell's Aquatic Farm

Oshkosh, Wis.

**ONION SETS**

Algers, K. W.

Crystal City, Texas

Anderson, Wm. B.

Norwood Park, Chicago, Ill.

Barnard Co., The W. W.

Chicago, Ill.

Barteldes Seed Co.

Denver, Colo.

**Blamberg Bros., Inc.****Baltimore, Md.**

(See Adv. on Page 59)

Bruce &amp; Co., Ltd., John A.

Hamilton, Ont., Canada

**Buist Co., Robert****Philadelphia, Pa.**

(See Adv. on Page 95)

**Chesmore Seed Co.****St. Joseph, Mo.**

(See Adv. on Page 71)

Chester &amp; Co., H. H.

Chicago, Ill.

**Comstock Ferre & Co.****Wethersfield, Conn.**

(See Adv. on Page 31)

Condon Bros., Seedsmen

Rockford, Ill.

**Corneli Seed Co.****St. Louis, Mo.**

(See Adv. on Page 17)

**Davenport Seed Co.****Davenport, Iowa**

(See Adv. on Page 17)

**Dorta, C. Garcia (Seed)****Teneriffe, Canary Islands**

(See Adv. on Page 77)

**Grand Junction Seed Co.****Grand Junction, Colo.**

(See Adv. on Page 39)

Gridley Maxon Co.

Chicago, Ill.

Hall Seed Co.

Louisville, Ky.

Harden &amp; Lewman

Louisville, Ky.

**Hart Seed Co., Chas. C.****Wethersfield, Conn.**

(See Adv. on Page 27)

Hayes Labish Farms

Salem, Oregon

Hollenbach, Peter

Chicago, Ill.

Kaufmann's Onion Set Warehouse

South Holland, Ill.

**Landreth Seed Co., D.****Bristol, Pa.**

(See Adv. on Page 3)

**Leonard Seed Co.****Chicago, Ill.**

(See Adv. on Third Cover)

**Louisville Seed Co.****Louisville, Ky.**

(See Adv. on Page 47)

Mangelsdorf Seed Co.

Atchison, Kan.

Manitowoc Seed Co.

Manitowoc, Wis.

## BULBS, PLANTS AND MISCELLANEOUS SEEDS—Continued

## Onion Sets—Continued

- Meeters, Inc.**  
Lansing, Ill.  
(See Adv. on Page 97)
- Nebraska Seed Co.**  
Omaha, Neb.  
(See Adv. on Page 49)
- Northrup, King & Co.**  
Minneapolis, Minn.  
(See Adv. on Page 21)
- Ohio Valley Seed Co.**  
Evansville, Ind.
- Page Seed Co.**  
Greene, N. Y.  
(See Adv. on Page 45)
- Peerbolte Growers, Inc.**  
South Holland, Ill.
- Quincy Seed Co.**  
Quincy, Ill.
- Rau, Lawrence**  
Chicago, Ill.
- Rubio, Ernesto**  
Arecibo, Porto Rico
- Schilder Bros.**  
Chillicothe, Ohio
- Snapp & Sons, J. P.**  
Limestone, Tenn.
- Spokane Seed Co.**  
Spokane, Wash.
- Steele, Briggs Seed Co.**  
Toronto, Canada  
(See Adv. on Page 26)
- Van Antwerp Seed Co.**  
Mobile, Ala.
- Prieto, Alberto Varela (Seed)**  
Teneriffe, Canary Islands
- Vaughan's Seed Store**  
Chicago, Ill.
- Waterman, Chas.**  
So. Holland, Ill.
- Wetsel Seed Co.**  
Harrisonburg, Va.
- Woodruff & Sons, F. H.**  
Milford, Conn.  
(See Adv. on Page 7)
- Woodruff & Sons, S. D.**  
Orange, Conn.
- Younkerman Seed Co.**  
Council Bluffs, Iowa

## PLANTS—FLOWER

- Alexander, J. K.**  
Bridgewater, Mass.
- American Bulb Company**  
Chicago, Ill.
- American Rose & Plant Co.**  
Springfield, Ohio
- Brazil Dahlia Farm**  
Brazil, Ind.
- Bushy Flower Gardens**  
Bushy, Va.
- Capital Fuel & Feed Co.**  
Phoenix, Ariz.
- Chautauqua Flower Fields**  
Bemis Point, N. Y.
- Hand Seed Co., Inc., A. M.**  
Portland, Ore.  
(See Adv. on Page 47)
- Hardy Plant & Pansy Farm**  
Baraboo, Wis.
- Hyde Co., H. A.**  
Watsonville, Calif.
- Ireland, Z. Jay**  
Pleasant Valley, N. Y.
- Lagomarsino & Sons, F.**  
Sacramento, Calif.  
(See Adv. on Page 61)
- Lind Plant Farms**  
Cotulla, Texas
- McGregor Bros. Co.**  
Springfield, Ohio
- McHutchison & Co.**  
New York, N. Y.
- Merritt, John W.**  
Farmingdale, L. I., N. Y.
- Mount Arbor Nurseries**  
Shenandoah, Iowa  
(See Adv. on Page 90)

- Myers & Scott**  
Van Buren, Ark.
- Onarga Nursery Co.**  
Onarga, Ill.
- Rosebank Nursery Co.**  
Huntsville, Ala.
- Roudabush's Seed Store**  
Wilmington, N. C.
- Schaumberg, Henry**  
Hammonton, N. J.
- Schmeiske, Wm. F.**  
Binghamton, N. Y.
- Skidelsky & Co., S. S.**  
New York City, N. Y.
- Smith Plant Farm, E. C.**  
Milano, Texas
- State Nursery & Seed Co.**  
Helena, Mont.
- Texas Seed & Plant Co.**  
Dallas, Texas

## VEGETABLE PLANTS

- Albany Plant & Seed Co.**  
Albany, Ga.
- Alger, K. W. (Grower)**  
Crystal City, Texas
- Alvy, Jack**  
Van Buren, Ark.
- Blackshear Plant Co.**  
Blackshear, Ga.
- Bruce Wholesale Plant Co.**  
Valdosta, Ga.
- Carolina Seed & Plant Co.**  
Florence, S. C.
- Clifton, J. A.**  
Russellville, Ark.
- Councill Seed Co.**  
Franklin, Va.
- Fulwood, P. D.**  
Tifton, Ga.
- Geraty & Co., Wm. C.**  
Yonges Island, S. C.
- Grand Junction Seed Co.**  
Grand Junction, Colo.  
(See Adv. on Page 39)
- Grossmann & Son, W.**  
Petersburg, Va.
- Hammell Seed Farms, Geo. Q.**  
Cedarville, N. J.
- Harvey Seed Co.**  
Montgomery, Ala.
- Hollywood Farms**  
Pavo, Ga.
- Hoopes Co., J. E. (Plants and Asparagus Roots)**  
Muscatine, Iowa
- Jefferson Farms, The**  
Albany, Ga.
- Kille, Willard B.**  
Swedesboro, N. J.
- Lagomarsino & Sons, F.**  
Sacramento, Calif.  
(See Adv. on Page 61)
- Ledden & Son, Orol**  
Sewell, N. J.
- Lehmann's Seed Store**  
Baton Rouge, La.
- Leonard, I. & J. L.**  
Iona, N. J.
- Lind Plant Farm**  
Cotulla, Texas
- May & Son, Inc., W. H.**  
Alexandria, Va.
- Myers Seed & Plant Co.**  
Tifton, Ga.
- Old Dominion Plant Co.**  
Franklin, Va.
- Omega Plant Co.**  
Omega, Ga.
- Ozark Seed & Plant Co.**  
Nashville, Ark.
- Parks, Walter**  
Darien, Ga.
- Piedmont Plant Co.**  
Albany, Ga.
- Quality Seed House**  
Chickasha, Okla.
- Riverview Farms**  
Bridgeton, N. J.
- Rochelle & Sons, F. W.**  
Chester, N. J.

**BULBS, PLANTS AND MISCELLANEOUS SEEDS—Continued****Vegetable Plants—Continued**

Rochelle, Paul F.  
Morristown, N. J.  
Ross Bros. Seed Co.  
Wichita, Kan.  
Roudabush's Seed Store  
Wilmington, N. C.  
Schroer Plant Farms  
Valdosta, Ga.  
Shreve & Son, J. W.  
Andalusia, Ala.  
Service Plant Co.  
Omega, Ga.  
Steiner Branch Seed Co.  
Grovettown, Ga.  
Stevenson, G. W.  
Fordyce, Ark.  
Stockton Seed Co.  
Stockton, Calif.  
Tidewater Plant Co.  
Franklin, Va.  
Todd, Geo. M.  
Greensboro, N. C.  
Van Antwerp Seed Co.  
Mobile, Ala.  
Wards Gardens  
Mobile, Ala.  
Williams, W. W.  
Quitman, Ga.  
Wood & Son, T. W.  
Richmond, Va.  
Wyatt & Sons Co., Job P.  
Raleigh, N. C.

**SEEDS—MISCELLANEOUS****CANARY SEED**

Blamberg Bros., Inc.  
Baltimore, Md.  
(See Adv. on Page 59)  
Corneli Seed Co.  
St. Louis, Mo.  
(See Adv. on Page 17)  
Crawford, Keen & Co.  
New York City, N. Y.  
De Groot, Van Nes, & Co.  
Rotterdam, Holland  
Dickinson Co., Albert  
Chicago, Ill.  
Duryea Seed Co., Inc.  
New York, N. Y.  
(See Adv. on Page 32)  
German, Gale T.  
New York, N. Y.  
Herbst Bros.  
New York City, N. Y.  
(See Adv. on Page 34)  
Hinton & Co., Inc.  
New York, N. Y.  
Johnson, Inc., J. Oliver  
Chicago, Ill.  
Justrite Co., The  
Milwaukee, Wis.  
Kellogg-Kelly Seed Co.  
St. Joseph, Mo.  
(See Adv. on Page 49)  
Magnesia Products Co.  
Milwaukee, Wis.  
Mangelsdorf & Bro., Ed. F.  
St. Louis, Mo.  
(See Adv. on Page 15)  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
(See Adv. on Page 15)  
Philadelphia Seed Co.  
Philadelphia, Pa.  
(See Adv. on Page 20)  
Radwaner Seed Co., I. L.  
New York, N. Y.  
(See Adv. on Pages 63 and 81)  
Scarlett & Co., Wm. G.  
Baltimore, Md.  
St. Louis Seed Co.  
St. Louis, Mo.  
(See Adv. on Page 59)  
Von Damm, F. A.  
Brooklyn, N. Y.

**LAWN GRASS SEED**

Aggeler & Musser Seed Co.  
Los Angeles, Calif.  
American Seed Co.  
Detroit, Mich.  
Arizona Feed & Seed Association  
Phoenix, Ariz.  
Barnard Co., W. W.  
Chicago, Ill.  
Corneli Seed Co.  
St. Louis, Mo.  
(See Adv. on Page 17)  
Dickinson Co., Albert  
Chicago, Ill.  
Doughten Seed Co.  
Jersey City, N. J.  
Duryea Seed Co., Inc.  
New York, N. Y.  
(See Adv. on Page 32)  
Engbretson Seed Co.  
Astoria Ore.  
Johnson, Inc., J. Oliver  
Chicago, Ill.  
Kellogg-Kelly Seed Co.  
St. Joseph, Mo.  
(See Adv. on Page 49)  
Kellogg Seed Co.  
Milwaukee, Wis.  
Klein, G. A.  
Los Angeles, Calif.  
Landreth Seed Co., D.  
Bristol, Pa.  
(See Adv. on Page 3)  
Leonard Seed Co.  
Chicago, Ill.  
(See Adv. on Third Cover)  
Louisville Seed Co.  
Louisville, Ky.  
(See Adv. on Page 47)  
McCullough Seed Co., The J. Chas.  
Cincinnati, Ohio  
(See Adv. on Page 15)  
McCullough's Sons Co., The J. M.  
Cincinnati, Ohio  
(See Adv. on Page 27)  
Mangelsdorf & Bro., Ed. F.  
St. Louis, Mo.  
(See Adv. on Page 15)  
Mount Arbor Nurseries  
Shenandoah, Iowa  
(See Adv. on Page 90)  
Northwest Seed Co., The  
Seattle, Wash.  
O. & M. Seed Co., The  
Green Springs, Ohio  
Philadelphia Seed Co.  
Philadelphia, Pa.  
(See Adv. on Page 20)  
Radwaner Seed Co., I. L.  
New York, N. Y.  
(See Adv. on Pages 63 and 81)  
Scarlett & Co., Wm. G.  
Baltimore, Md.  
Scott Co., I. W.  
Pittsburgh, Pa.  
Scott & Sons Co., O. M.  
Marysville, Ohio  
(See Adv. on Page 39)  
Seaboard Seed Co.  
Philadelphia, Pa.  
Seaside Bent Seed Co.  
Seattle, Wash.  
Sevin-Vincent Seed Co.  
San Francisco, Calif.  
Sun-Field Seed Service  
Chicago, Ill.  
Templin-Bradley Co.  
Cleveland, Ohio  
Williamson, Garfield  
New York City, N. Y.  
(See Adv. on Page 60)  
Woodruff & Sons, F. H.  
Milford, Conn.  
(See Adv. on Page 7)

## BULBS, PLANTS AND MISCELLANEOUS SEEDS—Continued

## POP CORN

American Popcorn Co.  
Sioux City, Iowa  
**Clark & Sons, C. S.**  
Wakeman, Ohio  
(See Adv. on Page 21)  
**Corneli Seed Co.**  
St. Louis, Mo.  
(See Adv. on Page 17)  
Dickinson Co., Albert  
Chicago, Ill.  
Reist Seed Co.  
Lancaster, Pa.  
Tuttle Popcorn Co., R. M.  
Spencer, Iowa

## POTATO SEED

Interstate Seed & Grain Co.  
Fargo, N. D.

## SEED POTATOES

Aggeler & Musser Seed Co.  
Los Angeles, Calif.  
Barnes Co., O. J.  
Grand Forks, N. D.  
Cochrane Co., T. H.  
Portage, Wis.  
**Davenport Seed Co.**  
Davenport, Iowa  
(See Adv. on Page 17)  
**Far North Potato Ass'n**  
Park River, N. D.  
**Hand Seed Co., Inc., A. M.**  
Portland, Ore.  
(See Adv. on Page 47)  
Hickox-Rumsey Co.  
Batavia, N. Y.  
Hopkins & Co., H. A.  
Minneapolis, Minn.  
Hyde Co., H. A.  
Watsonville, Calif.  
Interstate Seed & Grain Co.  
Fargo, N. D.  
May & Co., Inc., W. H.  
Alexandria, Va.  
**Miller & Co., Albert**  
Chicago, Ill.  
Myers & Scott  
Van Buren, Ark.  
**Philadelphia Seed Co.**  
Philadelphia, Pa.  
(See Adv. on Page 20)  
Pinner & Co.  
Suffolk, Va.  
Rohrer & Bro., P. L.  
Smoketown, Pa.  
Scarlett & Co., Wm. G.  
Baltimore, Md.  
Simmons Seed Co.  
Moorhead, Minn.  
Sun-Field Seed Service  
Chicago, Ill.  
Valker-Christensen Co.  
Minot, N. Dak.  
Van Antwerp Seed Co.  
Mobile, Ala.  
**Washburn-Wilson Seed Co.**  
Moscow, Idaho  
(See Adv. on Page 63)  
Woodruff & Sons, S. D.  
Orange, Conn.

## SEED CORN

Aggeler & Musser Seed Co.  
Los Angeles, Calif.  
**Associated Seed Growers, Inc.**  
New Haven, Conn.  
(See Adv. on Page 65)  
Atlantic Seed Co., Inc.  
Philadelphia, Pa.  
Barron, W. W.  
Mason, Mich.  
**Beridon, Jr., E. J.**  
Hamburg, La.  
(See Adv. on Page 17)  
Bernhard Seed Co., A.  
Parkston, S. D.

Bonahoom Seed Co., N.  
Hastings, Nebr.  
Bowman Seed Co., The  
Concordia, Kan.  
Cashman Seed Co.  
Owatonna, Minn.  
**Clark & Sons, C. S.**  
Wakeman, Ohio  
(See Adv. on Page 21)  
Cochrane Co., T. H.  
Portage, Wis.  
Coe Seed & Grain Co., D. O.  
Topeka, Kan.  
**Comstock, Ferre & Co.**  
Wethersfield, Conn.  
(See Adv. on Page 31)  
**Corneli Seed Co.**  
St. Louis, Mo.  
(See Adv. on Page 17)  
Council Bluffs Seed Co.  
Council Bluffs, Iowa  
Coy & Son, Chauncey P.  
Waterloo, Neb.  
Crabbs, Reynolds, Taylor Co.  
Crawfordsville, Ind.  
Dakota Improved Seed Co.  
Mitchell, S. D.  
Dassel Seed Co., Inc.  
Dassel, Minn.  
**Davenport Seed Co.**  
Davenport, Iowa  
(See Adv. on Page 17)  
Davis Seed Co., E. C.  
St. Peter, Minn.  
Davis, Zack  
Delaware, Ohio  
Dickinson Co., Albert  
Chicago, Ill.  
**Eagle Mill & Elevator Co. (Seed Corn)**  
Higginsville, Mo.  
Farmer Seed & Nursery Co.  
Faribault, Minn.  
Fielding's Sons, Geo. F.  
Manhattan, Kan.  
Forrest Seed Co., Inc.  
Cortland, N. Y.  
Frederick Seed Co.  
Greenwood, Neb.  
Gilmore, E. L. C.  
Ashland, Neb.  
**Griswold Seed & Nursery Co.**  
Lincoln, Nebr.  
(See Adv. on Page 49)  
Grossman & Son, W.  
Petersburg, Va.  
Healy Seed Co.  
Belle Center, Ohio  
Interstate Seed & Grain Co.  
Fargo, N. D.  
**Jacques, Wm. H.**  
Prescott, Wis.  
(See Adv. on Page 81)  
Johnson, Inc., J. Oliver  
Chicago, Ill.  
Knauf & Tesch Co.  
Chilton, Wis.  
Keller & Sons, Geo.  
Quincy, Ill.  
Kelly Seed Company  
Peoria, Ill.  
Kelly Western Co.  
Salt Lake City, Utah  
**King & Sons, H. C.**  
Battle Creek, Mich.  
(See Adv. on Page 15)  
Klingensmith Seed Co., E. J.  
New Augusta, Ind.  
**Landreth Seed Co., D.**  
Bristol, Pa.  
(See Adv. on Page 3)  
**Mangelsdorf & Bro., Ed. F.**  
St. Louis, Mo.  
(See Adv. on Page 15)  
Mangelsdorf Seed Co.  
Atchison, Kan.  
Marshall Seed Co.  
Marshall, Mo.  
May & Son, Inc., W. H.  
Alexandria, Va.  
Meinershagen Seed House  
Higginsville, Mo.

# BUIST'S GARDEN SEEDS

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**ROBERT BUIST COMPANY**

SEEDSMEN SINCE 1828

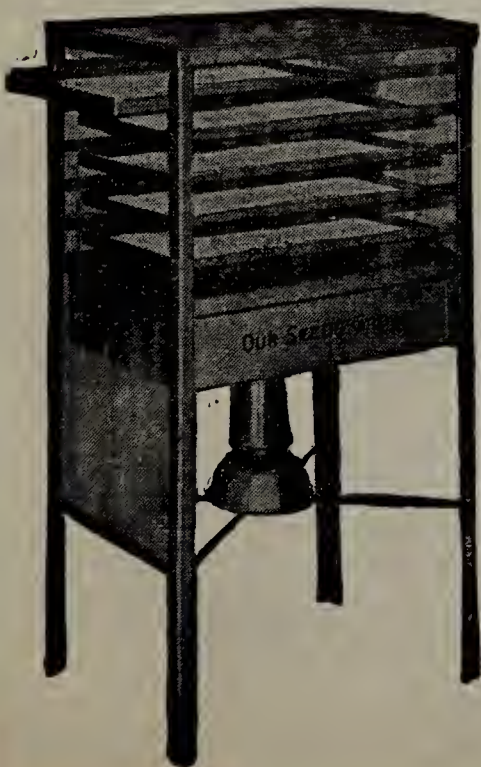
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--

PENNA.

## DAYLIGHT GERMINATOR

*The Sho-Gro Shows  
the Growth*



Used by seed dealers throughout the country both  
in laboratory and display window

**Rapid — Accurate —  
Inexpensive**

ELECTRIC \$30, OIL HEAT \$23

Write for Full Particulars Today

**Seed Trade Reporting Bureau**

325 W. Huron St.

CHICAGO, ILL.

European Representatives

Kelway & Son, Langport, Somerset, England

## BULBS, PLANTS AND MISCELLANEOUS SEEDS—Continued

## Seed Corn—Continued

**Minneapolis Seed Co.**  
Minneapolis, Minn.  
(See Adv. on Page 17)

**Morris Grain & Seed Co.**  
Morris, Ill.

**Nishna Valley Seed Co.**  
Shenandoah, Iowa

**Northrup, King & Co.**  
Minneapolis, Minn.  
(See Adv. on Page 21)

**Oklahoma Improved Seed Co.**  
Chickasha, Okla.

**Ozark Nursery & Seed Co.**  
Nashville, Ark.

**O. & M. Seed Co.**  
Green Springs, Ohio

**Page Seed Co.**  
Greene, N. Y.  
(See Adv. on Page 45)

**Pedrick & Son, Geo. R.**  
Pedricktown, N. J.

**Peppard Seed Co., J. G.**  
Kansas City, Mo.

**Reist Seed Co.**  
Lancaster, Pa.

**Rice Seed Co., Jerome B.**  
Cambridge, N. Y.  
(See Adv. on Page 31)

**Richards & Sons, Ross V.**  
North Manchester, Ind.

**Robinson Seed Co., J. C.**  
Waterloo, Neb.

**Rogers Bros. Seed Co.**  
Chicago, Ill.  
(See Adv. on Rear Cover)

**Russell-Heckle Seed Co.**  
Memphis, Tenn.

**Schell, Inc., Walter S.**  
Harrisburg, Pa.

**Simmons Seed Co.**  
Moorhead, Minn.

**Sioux City Seed Co.**  
Sioux City, Iowa

**Skromme Seed Co.**  
Roland, Iowa

**Springfield Seed Co.**  
Springfield, Mo.

**Standard Seed Co.**  
Des Moines, Iowa

**Steele, Briggs Seed Co., Ltd.**  
Toronto, Canada  
(See Adv. on Page 26)

**Stevens, Ltd., F. B.**  
Chatham, Ontario, Canada

**Strayer Seed Farm**  
Hudson, Iowa

**Sun-Field Seed Service**  
Chicago, Ill.

**Tanguay, Ltd.**  
Quebec, Canada

**Vance Bros.**  
Tillsonburg, Ontario, Canada

**Vermillion Seed Co.**  
Vermillion, S. D.

**Western Seed & Irrigation Co.**  
Fremont, Neb.

**White & Co., Ltd., H.**  
Shelburne, Ontario, Canada

**Wilson, Glen**  
Blair, Neb.

**Wood & Sons, T. W.**  
Richmond, Va.

**Woodruff & Sons, F. H.**  
Milford, Conn.  
(See Adv. on Page 7)

**Woodruff & Sons, S. D.**  
Orange, Conn.

## TREE SEEDS

**Aggeler & Musser Seed Co.**  
Los Angeles, Calif.

**Albany Seed Co.**  
Albany, Ore.

**Amtorg Trading Corporation**  
New York, N. Y.

**Colorado Seed Co.**  
Denver, Colo.

**Ellis, F. M.**  
Griffin, Ga.

**Grunwald, A.**  
Wiener-Neustadt, Austria

**Herbst Brothers**  
(Agts. for T. Sakata & Co., Yokohama, Japan)  
New York City  
(See Adv. on Page 34)

**Katzenstein & Co., Otto**  
Atlanta, Ga.

**Loewith, Inc., Julius**  
New York City, N. Y.

**Manshu Nosan Shokai, Inc.**  
Dairen, So. Manchuria, China  
(See Adv. on Page 77)

**North Eastern Forestry Co.**  
Cheshire, Conn.

**Rosebank Nursery Co.**  
Huntsville, Ala.

**Schon, Ltd., Jacob S.**  
Bruenn, Czechoslovakia

**Tokyo Konoen, Ltd.**  
Shibuya, Tokyo, Japan

## VEGETABLE ROOTS

**Corneli Seed Co.**  
St. Louis, Mo.  
(See Adv. on Page 17)

**Hyde Co., H. A.**  
Watsonville, Calif.

**Lagomarsino & Sons, F.**  
Sacramento, Calif.  
(See Adv. on Page 61)

**Ledden, Orol**  
Sewell, N. J.

**Pedrick & Son, Geo. R.**  
Pedricktown, N. J.

**Riverview Farms**  
Bridgeton, N. J.

**Shedaker & Son, B. D.**  
Burlington, N. J.

## WILD RICE

**Fleming, Ernest**  
Bena, Minn.

**MacGregor-Dennerly Co.**  
Aitkin, Minn.

**Minnesota Wild Rice Co.**  
La Porte, Minn.

**Scott, George**  
Ballclub, Minn.

**Terrell's Aquatic Farm**  
Oshkosh, Wis.

## BROKERS

**Amtorg Trading Corporation**  
New York, N. Y.

**Appel Commission Co., C. H.**  
St. Louis, Mo.

**Bernham, Inc.**  
New York, N. Y.

**Crawford, Keen & Co.**  
New York, N. Y.

**Dreyfus, Paul**  
Paris, France

**Dunn, Arthur G.**  
New York City, N. Y.

**German, Gale T.**  
New York, N. Y.

**Herbst Bros.**  
New York, N. Y.  
(See Adv. on Page 34)

**Lecourt, Rene**  
Paris, France

**Loewith, Inc., Julius**  
New York City, N. Y.

**McCarty Co., The J. A.**  
Evansville, Ind.

**McHutchison & Co.**  
New York, N. Y.

**Mason, R. E.**  
San Francisco, Calif.

**Meier, J. G.**  
Salina, Kans.

**Muller & Slaughter**  
Laredo, Tex.

**Pincus, J. W.**  
New York, N. Y.

**BULBS, PLANTS AND MISCELLANEOUS SEEDS—Continued****Brokers—Continued**

**Radwaner Seed Co., I. L.**  
New York, N. Y.

(See Adv. on Pages 63 and 81)

**Southern Brokerage Co.** (Seeds, Fertilizers, Onion Sets)  
Memphis, Tenn.

**Sperco & Son, C. J.**  
New York, N. Y.

**Trott, Owen F.**  
London, England

**Flower Co., S. W.**  
Toledo, Ohio

**Loewith, Inc., Julius**  
New York City, N. Y.

**Picker & Beardsley Comm. Co.**  
St. Louis, Mo.

**Pitt & Scott, Inc.**  
New York City, N. Y.

**Radwaner Seed Co., I. L.**  
New York City, N. Y.

(See Adv. on Pages 63 and 81)

**Sevin-Vincent Seed Co.**  
San Francisco, Calif.

**Southworth & Co.**  
Toledo, Ohio

**FORWARDING AGENTS**

**Furness, Withy & Co., Ltd.**  
New York City, N. Y.

**McHutchison & Co.**  
New York, N. Y.

**Meadows & Co., Thos.**  
New York City, N. Y.

**Pitt & Scott**  
New York, N. Y.

**Ravaud, A.**  
Paris, France

**SEED COMMISSION FIRMS**

**American Seed Co.**  
Detroit, Mich.

**Appel Commission Co., C. H.**  
St. Louis, Mo.

**Bernham, Inc.**  
New York, N. Y.

**SEED STORAGE AND DISTRIBUTION**

**Blue Line Storage Co.**  
Des Moines, Iowa

**Crooks Terminal Warehouse**  
Chicago, Ill.

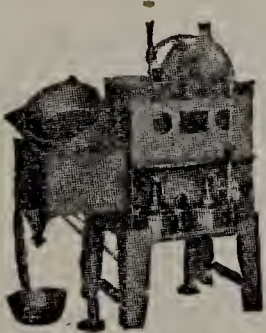
**Currier-Lee Warehouse Co.**  
Chicago, Ill.

**Binyon-O'Keefe Fireproof Storage Co.**  
Ft. Worth, Texas

**Bush Terminal Co.**  
New York City, N. Y.

**General Storage Co.**  
Cleveland, Ohio

**Sevin-Vincent Seed Co.**  
San Francisco, Calif.

**MOISTURE TESTER**

Made According to Government  
Specifications for SEED and GRAIN  
Heated by gas, electricity or alcohol  
for one to six tests at a time

**SEED TRADE REPORTING BUREAU**  
325 W. Huron St. CHICAGO, ILL.

**QUALITY ONION SETS**

for your

**STORE AND COUNTER SALES**

Write us for particulars

**MEETERS, INC.**



**Lansing, Ill.**

⌘

IT PAYS TO SPRAY

⌘

DAMAGE DONE by insects and fungus diseases amounts to many millions of dollars annually. In order to combat them, manufacturers of insecticides and fungicides have scientifically prepared many sprays and dusts which have been found effective in the control and eradication of these pests and diseases.

These products are sold by the manufacturers under various trade names. Retail seedsmen have found it most profitable to have them for sale. Each year the demand for insecticides and fungicides is increasing.

In order to make it easier for the users of this GUIDE to ascertain what insecticide or fungicide to use for the numerous pests that infest growing crops, the following table has been arranged giving the names of some of the products which have been found effective. Directions on how to use these products are not given in the table, due to the fact that the manufacturers show these directions on the containers.

Following is a list of the manufacturers of the products named in this table:

California Spray Chemical Co., Berkeley, Calif. "Garden Volck" "Nursery Volck"	The Kalo Co., Quincy, Ill. "Kalo Spray" "Kaloil" "Kalite"	Rose Manufacturing Co., Philadelphia, Pa. "Aphistrogen" "Insectrogen" "Mexogen"
Chipman Chemical Company, Bound Brook, N. J. "Cubor" "Cubor Dust" "Calgreen"	McCormick & Co., Inc., Baltimore, Md. "Red Arrow"	Shepard Laboratories, Council Bluffs, Ia. "Sheps"
William Cooper & Nephews, Chicago, Ill. "Derrisol"	McLaughlin Gormley King & Co., Minneapolis, Minn. "Ever Green" "Selocide"	Tobacco By-Products & Chemical Corporation, Louisville, Ky. "Black Leaf 40" "Nicofume Liquid"
Grasselli Chemical Co., Cleveland, Ohio "Dutox" "Sulforon"	Mechling Bros. Chemical Co., Camden, N. J. "Pyrote"	Andrew Wilson, Inc., Springfield, N. J. "Awine" "Rotofume" "Tri-Tox-Cide" "Fung-O"
"Kleanup Oil" "Manganar Rose Dust"	Nicotine Manufacturing Co., St. Louis, Mo. "Nicotinum" "Red Ring" Nikoteen "Nikoteen"	
Hammond Paint & Chemical Co. Beacon, N. Y. "Slug Shot" "Thrip Juice" "Nicotine Soap" "Rose Dust"		

Spraying Calendar

	Disease or Insect	What to Use				
Apple and Pear	Codling Moth	Kalo	Slug Shot			
	San Jose Scale	Lime-Sulphur	Kleenup Oil			
	Scab	Kaloil				
	Wooly Aphis	Black Leaf 40 Garden Volck	Nicotinum Aphistrogen	Thrip Juice Derrisol	Awine Pyrote	Cubor
Asparagus	Asparagus Beetle	Kalite	Red Arrow	Awine	Cubor	
Aster	Aphis	Evergreen "Red Ring" Nikoteen Kaloil	Black Leaf 40 Garden Volck Red Arrow	Aphistrogen Sheps Thrip Juice	Derrisol Awine Pyrote	
	Aster Beetle	Ever Green Kalite	Dutox Red Arrow	Sheps Slug Shot	Awine Cubor	
Beans	Aphis	Ever Green Nicotinum Kaloil	Black Leaf 40 Red Arrow Aphistrogen	Sheps Thrip Juice Pyrote	Derrisol Awine Cubor	
	Mexican Bean Beetle	Ever Green Kalite	Red Arrow Slug Shot	Dutox Mexogen	Sheps Awine	Cubor
Cabbage Cauliflower Brussels Sprouts	Cabbage Worm	Ever Green Kalo Spray Awine	Dutox Insectrogen Derrisol	Sheps Slug Shot Pyrote	Cubor Cubor Dust	
Carnation	Thrips	Ever Green Nicotinum	Kaloil Red Arrow	Sheps Thrip Juice	Derrisol Cubor	
	Aphis	Ever Green Nicotinum Kaloil	Red Arrow Black Leaf 40 Garden Volck	Aphistrogen Sheps Cubor	Thrip Juice Derrisol	
Cherry	Rot	Sulforon				
	Curculio	Kalospray				

# Sell CUBOR

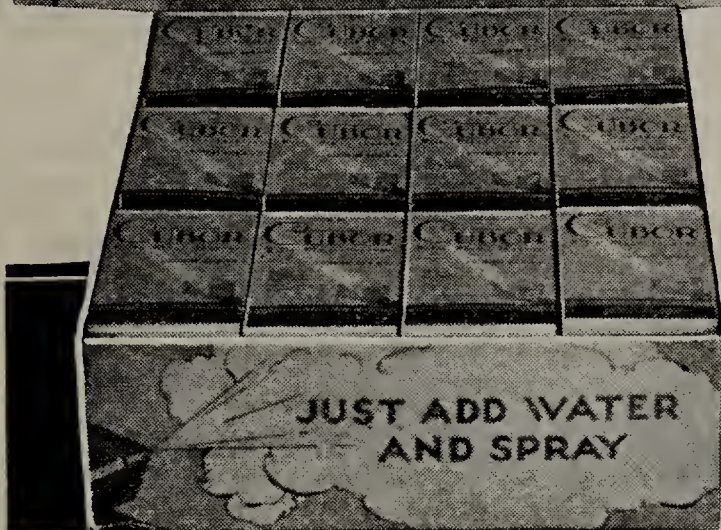
from this attractive Display Carton

Discounts yield substantial  
**PROFIT**

Uniform in Strength  
Proved in Value

Chipman Chemical Company, Inc.  
Bound Brook . . . . . New Jersey

Manufacturers of Insecticides,  
Fungicides and Weed Killers



**A SAFE-COMplete  
PYRETHRUM-  
ROTENONE SPRAY**

## FUMIGANTS **NIKOTEEN** SPRAYS

NIKOTEEN LIQUID

POWDER

APHIS PUNK  
for  
Greenhouses

RED RING



BRAND

**INSECTICIDES**

NIKOTEEN LIQUID  
for Gardens

NICOTINUM  
for  
Orchards and  
Poultry

## READ SEED WORLD

*News and Advertising*

for all the latest developments in the Seed Trade Field

## Spraying Calendar (Continued)

	Disease or Insect	What to Use				
Chrysanthemum	Aphis	Nicofume Liquid Ever Green Nicotinum	Kaloil Garden Volck Red Arrow	Aphistrogen Sheps Thrip Juice	Derrisol Awine Pyrote	Cubor
	Thrips	Nicofume Liquid Ever Green Nicotinum	Kaloil Garden Volck Thrip Juice	Red Arrow Sheps Derrisol	Cubor Cubor Dust	
Cucumber	Striped Beetle	Ever Green Kalite	Dutox Cubor	Red Arrow	Slug Shot	
	Aphis	Black Leaf 40 Ever Green Nicotinum	Kaloil Red Arrow Aphistrogen	Sheps Thrip Juice Derrisol	Awine Pyrote Cubor	
Currant	San Jose Scale	Kalospray	Garden Volck			
	Worm	Ever Green Insectrogen	Slug Shot Pyrote	Derrisol Cubor	Awine	
Dahlia	Aphis	Black Leaf 40 Ever Green Nicotinum	Kaloil Garden Volck Red Arrow	Aphistrogen Sheps Thrip Juice	Derrisol Awine Pyrote	Cubor
	Tarnished Plant Bug	Ever Green Kaloil	Garden Volck Red Arrow	Slug Shot	Awine Cubor	
	Thrips	Black Leaf 40 Ever Green Nicotinum	Kaloil Garden Volck Thrip Juice	Red Arrow Sheps Derrisol	Cubor Cubor Dust	
Ferns	White Fly	Ever Green "Red Ring" Nikoteen Kaloil	Nursery Volck Red Arrow	Sheps Thrip Juice	Derrisol Awine Cubor	
	Aphis	Nicofume Liquid Ever Green Nicotinum	Kaloil Garden Volck Red Arrow	Aphistrogen Sheps	Thrip Juice Derrisol Cubor	
Gooseberry	Mildew	Kalite	Garden Volck			
	Worm	Ever Green Kalite	Insectrogen Slug Shot	Derrisol Cubor	Awine Pyrote	
Nasturtium	Aphis	Black Leaf 40 Ever Green Nicotinum	Kaloil Garden Volck Red Arrow	Aphistrogen Sheps Pyrote	Thrip Juice Derrisol Cubor	
Plum	Rot	Sulforon				
	Curculio	Kalospray				
Potato	Early Blight	Bordeaux				
	Late Blight	Bordeaux				
	Potato Bugs	Kalite Dutox	Paris Green Insectrogen	Sheps Calygreen	Slug Shot Pyrote	
Roses	Red Spider	Kalite Nursery Volck	Red Arrow Sheps	Derrisol Manganar Rose Dust	Awine Cubor	Selocide
	Aphis	Ever Green Black Leaf 40 Nicotinum	Kaloil Garden Volck Red Arrow	Aphistrogen Sheps Rose Dust	Thrip Juice Awine Pyrote	Cubor
	Leaf Roller	Kalospray	Red Arrow	Thrip Juice	Kleenup Oil	Cubor
	Beetles	Dutox	Slug Shot	Awine	Cubor	
Sweet Pea	Aphis	Nicofume Liquid Ever Green Nicotinum	Kaloil Garden Volck Red Arrow	Aphistrogen Thrip Juice Pyrote	Derrisol Awine Cubor	
Tomato	Anthracnose	Thrip Juice	Bordeaux			
	Leaf Spot	Bordeaux				
Watermelon and Muskmelon	Anthracnose	Bordeaux	Thrip Juice			
	Aphis	Black Leaf 40 Ever Green Kaloil	Red Arrow Aphistrogen	Sheps Thrip Juice Pyrote	Derrisol Awine Cubor	
	Beetles	Ever Green	Kalite	Dutox	Slug Shot	Cubor



## Two Big Profit Makers

**SHEPS PLANT SPRAY** leads among all non-poisonous plant insecticides. Absolutely effective-economical ( $\frac{1}{2}$  oz. makes 1 gal. spray solution), repeats readily, put up in sizes selling from 10c and up.

**SHEPS CONCENTRATED CATTLE SPRAY** enables the farmer to mix a better barnyard fly spray at a great saving in cost. And it's a real profit item for the dealer.

*Write for Prices and Discounts. Do it today. We will also send you free sample. Let SHEP help you make more money during 1933.*

## SHEPARD LABORATORIES

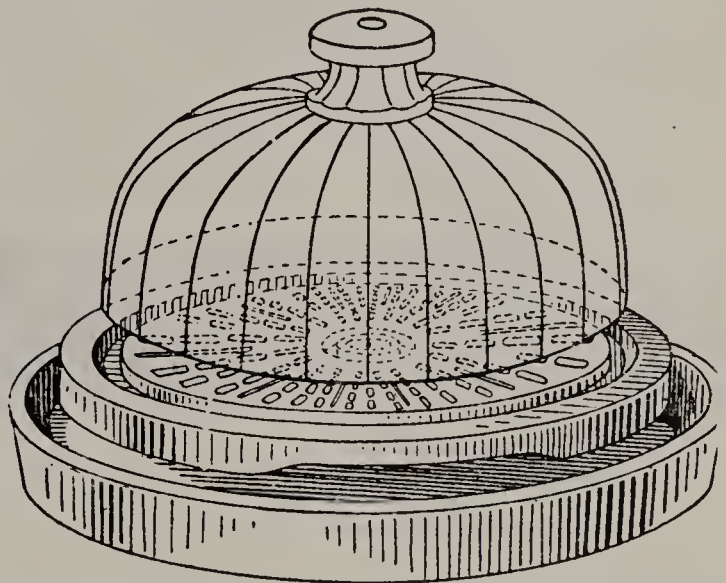
Council Bluffs, Iowa



## Self-Watering Germinator

For Field, Vegetable, Flower and Tree Seeds

Daylight Efficient for Long Tests Easily Sterilized



Now after much experimenting a reliable and efficient self-moistening germinator is available. The self-moistening porous disc has divided surface to facilitate counting. There are 10 sections of 10 indentations. The cover is of clear glass and ventilated.

This daylight germinator will attract attention in store, office or display window. More than 100 of these germinators are used by one of the large seed houses. It is guaranteed to be satisfactory. Price \$3.50 each, or \$3.25 in dozen lots, delivered in the United States.

## The Seed Trade Reporting Bureau

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Chicago

# SEED BAG TRIERS

## QUICK — SAFE CONVENIENT

Seed triers for quick, convenient drawing of samples without opening or tearing bag. Brass with steel point heavily nickel plated, with solid leather protector.

6 in. long, Price \$1.00 ea.; \$11.00 per doz.

9 in. long, with metal shield, Price \$2.00 ea.

## Seed Trade Reporting Bureau

325 W. Huron St.

CHICAGO

ILLINOIS



## SIDE LINE MERCHANDISE FERTILIZERS AND SPREADERS

### FERTILIZERS

Adco Co.  
Philadelphia, Pa.  
Aggeler & Musser Seed Co.  
Los Angeles, Calif.  
American Agricultural Chem. Co.  
New York, N. Y.  
**American Bulb Co.**  
**Chicago, Ill.**  
(See Adv. on Page 38)  
American Limestone Co.  
Knoxville, Tenn.  
Armour Fertilizer Wks.  
Chicago, Ill.  
Atkins & Durbrow  
New York, N. Y.  
Atlanta Chemical Co.  
Atlanta, Ga.  
Barrett Co., The  
New York City, N. Y.  
Baugh & Sons Co.  
Baltimore, Md.  
Bon Arbor Chemical Co.  
Paterson, N. J.  
Bramley & Son  
Cleveland, Ohio  
**Carus Chemical Co.**  
**La Salle, Ill.**  
(See Adv. on Page 103)  
Darling & Co.  
Chicago, Ill.  
Electric Sprayit Co.  
South Bend, Ind.  
Federal Chemical Co.  
Columbia, Tenn.  
Fidelity Chemical Corp.  
Houston, Texas  
Flower City Plant Food Co., Inc.  
Pittsford, N. Y.  
Fujiya Fertilizer & Seed Co.  
Moneta, Calif.  
Garden Supplies (1929), Ltd.  
Liverpool, England  
Goulard & Olena, Inc.  
New York, N. Y.  
**Grasselli Chemical Co., The**  
**Cleveland, Ohio**  
(See Adv. on Second Cover)  
Hyper-Humus Co.  
Newton, N. J.  
International Agricultural Corp.  
New York, N. Y.  
Jax Plant Food Co.  
Birmingham, Ala.  
J. & J. Tool & Machine Co.  
Chicago, Ill.  
Koppers Products Co. (Package)  
Pittsburgh, Pa.  
National Plant Food Co.  
Eau Claire, Wis.  
**Natural Guano Co.**  
**Aurora, Ill.**  
(See Adv. on Page 105)  
Ober & Sons Co., G.  
Baltimore, Md.  
Pacific Manure & Fertilizer Co.  
San Francisco, Calif.  
Parmenter & Polsey Fertilizer Co.  
Boston, Mass.  
Plantabbs Corp.  
Baltimore, Md.  
Premier Poultry Manure Co.  
Chicago, Ill.  
**Pulverized Manure Co.**  
**Chicago, Ill.**  
(See Adv. on Page 103)  
Read Phosphate Co.  
Nashville, Tenn.  
Reading Bone Fertilizer Co.  
Reading, Pa.  
Reading Chemical Co.  
Reading, Pa.

Robin Jones Phosphate Co.  
Nashville, Tenn.  
Rogers & Hubbard  
Portland, Conn.  
Royster Guano Co., F. S.  
Norfolk, Va.  
Ruhm Phosphate & Chemical Co.  
Mt. Pleasant, Tenn.  
Sanderson Fertilizer & Chemical Co.  
New Haven, Conn.  
Smith Agricultural Chemical Co.  
Columbus, Ohio  
Sodus Humus Co.  
Benton Harbor, Mich.  
Stadler Products Co.  
Cleveland, Ohio  
Stauffer Chemical Co.  
Chicago, Ill.  
Stevens, Geo. (Hardwood Ashes)  
Peterborough, Ont., Canada  
**Stimulant Laboratories, Inc.**  
**Long Island City, N. Y.**  
(See Adv. on Page 117)  
Swift & Co.  
Chicago, Ill.  
Synthetic Nitrogen Products Corp.  
New York City, N. Y.  
Templin-Bradley Co., The  
Cleveland, Ohio  
Tennessee Corp.  
New York, N. Y.  
Uniform Products Co.  
New York, N. Y.  
United States Guano Co.  
Baltimore, Md.  
Virginia-Carolina Chemical Corp.  
Richmond, Va.  
**Williamson, Garfield**  
**New York, N. Y.**  
(See Adv. on Page 60)  
**Wilson, Inc., Andrew**  
**Springfield, N. J.**  
(See Adv. on Page 121)  
Wilson & Co.  
Chicago, Ill.  
York Chemical Works  
York, Pa.

### FERTILIZER PLACERS

Browning & Son  
Utica, N. Y.

### FERTILIZER SPRAYERS

A-B-C Mfg. Co.  
Quincy, Ill.  
Alliance Mfg. Co.  
Alliance, Ohio  
Electric Sprayit Co.  
South Bend, Ind.  
Jax Plant Food Co.  
Birmingham, Ala.  
J. & J. Tool & Machine Co.  
Chicago, Ill.  
Lenox Misty Sprayer Mfg. Co.  
New York, N. Y.  
Vex Sales Corp.  
Chicago, Ill.

### FERTILIZER SPREADERS

Allen & Co., Inc., S. L.  
Philadelphia, Pa.  
Baier Bros. Mfg. Co.  
Cissna Park, Ill.  
Bain, J. S.  
Cedar Rapids, Iowa  
Bon Arbor Chemical Co.  
Paterson, N. J.  
Brinly Hardy Co.  
Louisville, Ky.  
Browning & Son  
Utica, N. Y.  
Caledonia Bean Harvester Works  
Caledonia, N. Y.



## Sell Natural Plant Foods

Wizard Manures are pure, highly concentrated and absolutely weedless. Attractively packed in paper lined bags in many sizes. These quality products have served the trade for 27 years. A free sales service brings in orders and makes Wizard easy to sell.

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**The Pulverized Manure Co.,** 39 UNION STOCK YARDS  
CHICAGO, ILLINOIS

**WIZARD SHEEP AND COW MANURES**

## Manganese Starvation

PREVENTED WHEN YOU USE  
**CARUS Manganese Sulfate**

Helps blossoming, increases yields, aids plants to mature earlier, bearing fruit of better quality and flavor which keep and ship better. It also assists to prevent Yellows (Chlorosis) of spinach, in fall especially, tomatoes, peas, beans, etc. Beneficial to all plants growing in sweet soils under glass or in the open field.

Supplies 5 additional plant food elements supplementary to commercial fertilizers balancing the plant's mineral diet. When used in conjunction with commercial fertilizers, growers find it to give better results than manure fertilization.



The new handbook, "Manganese Sulfate, Its Use and Application in Agriculture" sent on request free. Write for your copy today.

**Carus Chemical Co., Inc.**

LaSalle Dept. SW1 Illinois

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Correctly  
Listed in this Guide?

*If Not  
Notify*

**SEED WORLD**

Chicago, Ill

Publishers of

**The Seed Trade Buyers' Guide**

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They stick with a lick, unlike the mule which  
you lick with a stick. Thanks, it will help us

**HELP YOU**

## FERTILIZERS AND SPREADERS—Concluded

## Fertilizer Spreaders—Continued

Campbell-Hausfeld Co., The  
Harrison, Ohio  
Crown Mfg. Co.  
Phelps, N. Y.  
Cyclone Seeder Co., The  
Urbana, Ind.

Ellis-Keystone Agricultural Works  
Pottstown, Pa.

(See Adv. on Page 113)

Emerson-Brantingham Implement Co.  
Rockford, Ill.  
Farquhar, Ltd., A. B.  
York, Pa.  
Geyer Mfg. Co.  
Rock Falls, Ill.

## Hoeft &amp; Co.

North Chicago, Ill.

(See Adv. on Pages 105 and 133)

Hyper-Humus Co.  
Newton, N. J.

New Beeman Tractor Co., The  
Minneapolis, Minn.  
Salem Tool Co.  
Salem, Ohio  
Schuh Bros. Co.  
Indianapolis, Ind.  
Thompson & Sons, O. E.  
Ypsilanti, Mich.

Wilson, Inc., Andrew  
Springfield, N. J.

(See Adv. on Page 121)

## HUMUS

Florida Humus Co.  
Zellwood, Fla.  
Hyper-Humus Co.  
Newton, N. J.  
Natural Humus Co.  
Philadelphia, Pa.  
Wilson, Inc., Andrew  
Springfield, N. J.  
(See Adv. on Page 121)

## GARDEN AND FIELD IMPLEMENTS AND SUPPLIES

## CELERY BLEACHERS

Disbrow Mfg. Co.  
Newark, N. J.

(See Adv. on Pages 151 and 153)

## CULTIVATORS

Allen & Co., Inc., S. L.  
Philadelphia, Pa.  
American Fork & Hoe Co.  
Cleveland, Ohio  
Bacon Mfg. Co.  
Pontiac, Mich.  
Brinly Hardy Co.  
Louisville, Ky.  
Brown Mfg. Co.  
Zanesville, Ohio  
Buffum Tool Co.  
Louisiana, Mo.  
Case Co., J. I.  
Racine, Wis.  
Ellis-Keystone Agricultural Works  
Pottstown, Pa.  
(See Adv. on Page 113)  
Emerson-Brantingham Implement Co.  
Rockford, Ill.  
Empire Plow Co.  
Cleveland, Ohio  
Geyer Mfg. Co.  
Rock Falls, Ill.  
Gilson Co., J. E.  
Port Washington, Wis.  
Gravely Motor Plow & Cultivator Co.  
Dunbar, W. Va.  
Hayes Pump & Planter Co.  
Galva, Ill.  
Hudson Mfg. Co., H. D.  
Chicago, Ill.  
Leroy Plow Co.  
Leroy, N. Y.  
New Beeman Tractor Co., The  
Minneapolis, Minn.  
Norcross & Sons, C. S.  
Bushnell, Ill.  
(See Adv. on Page 109)  
Ohio Cultivator Co.  
Bellevue, Ohio  
Pioneer Mfg. Co.  
West Allis, Milwaukee, Wis.  
Progressive Machinery Co.  
Minneapolis, Minn.  
Schaible Mfg. Co.  
Elyria, Ohio  
Scott Co., I. W.  
Pittsburgh, Pa.  
Ulrich Mfg. Co.  
Rock Falls, Ill.  
Utilitor Co., The  
Dayton, Ohio  
Wilbern Shared Forge Co.  
Rock Falls, Ill.

## DIBBLES

Johnson, Inc., Wm.  
Newark, N. J.

## DRILLS

Allen & Co., Inc., S. L.  
Philadelphia, Pa.  
American Fork & Hoe Co.  
Cleveland, Ohio  
Bacon Mfg. Co.  
Pontiac, Mich.  
Benthall Machine Co.  
Suffolk, Va.  
Brinly Hardy Co.  
Louisville, Ky.  
Crown Mfg. Co.  
Phelps, N. Y.  
Ellis-Keystone Agricultural Works  
Pottstown, Pa.  
(See Adv. on Page 113)  
Geyer Mfg. Co.  
Rock Falls, Ill.  
Hayes Pump & Planter Co.  
Galva, Ill.  
Hudson Mfg. Co., H. D.  
Chicago, Ill.  
New Beeman Tractor Co., The  
Minneapolis, Minn.  
Progressive Machinery Co.  
Minneapolis, Minn.

## FANNING MILLS

Burch Corp.  
Crestline, Ohio  
Ferrell & Co., A. T.  
Saginaw, Mich.  
Howes Co., Inc., S.  
Silver Creek, N. Y.  
(See Adv. on Page 155)  
Owens Co., J. L.  
Minneapolis, Minn.

## GARDEN LINE REELS

Johnson, Inc., Wm.  
Newark, N. J.

## GARDEN TRACTORS

Gilson-Bolens Mfg. Co.  
Port Washington, Wis.  
Gravely Motor Plow & Cultivator Co.  
Dunbar, W. Va.  
Leroy Plow Co.  
Leroy, N. Y.  
Monta Mower Sales Co.  
Grand Rapids, Mich.  
New Beeman Tractor Co., The  
Minneapolis, Minn.

THE

2

## LEADING PLANT FOODS

### Sheep's Head Pulverized Sheep Manure

A concentrated organic plant food, sterilized of weed seeds, for use where quick, active results are desired. Packed 5 lbs., 10, 25, 50, 100 pounds to the bag.



### Sheep's Head Sterilized Cattle Manure

For plants requiring a loose, cool soil reclaimant; especially desirable for flowers, such as roses, dahlias, tulips, house plants. Sterilized of weed seeds. Organic. Odorless. Packed 100 pounds to the bag.

These two products are all the plant foods you need to build yourself a thriving seed business—in store or catalog. Send us your requirements and we will furnish copy, layout and cuts for catalog or newspaper use. Ask for our dealer proposition.

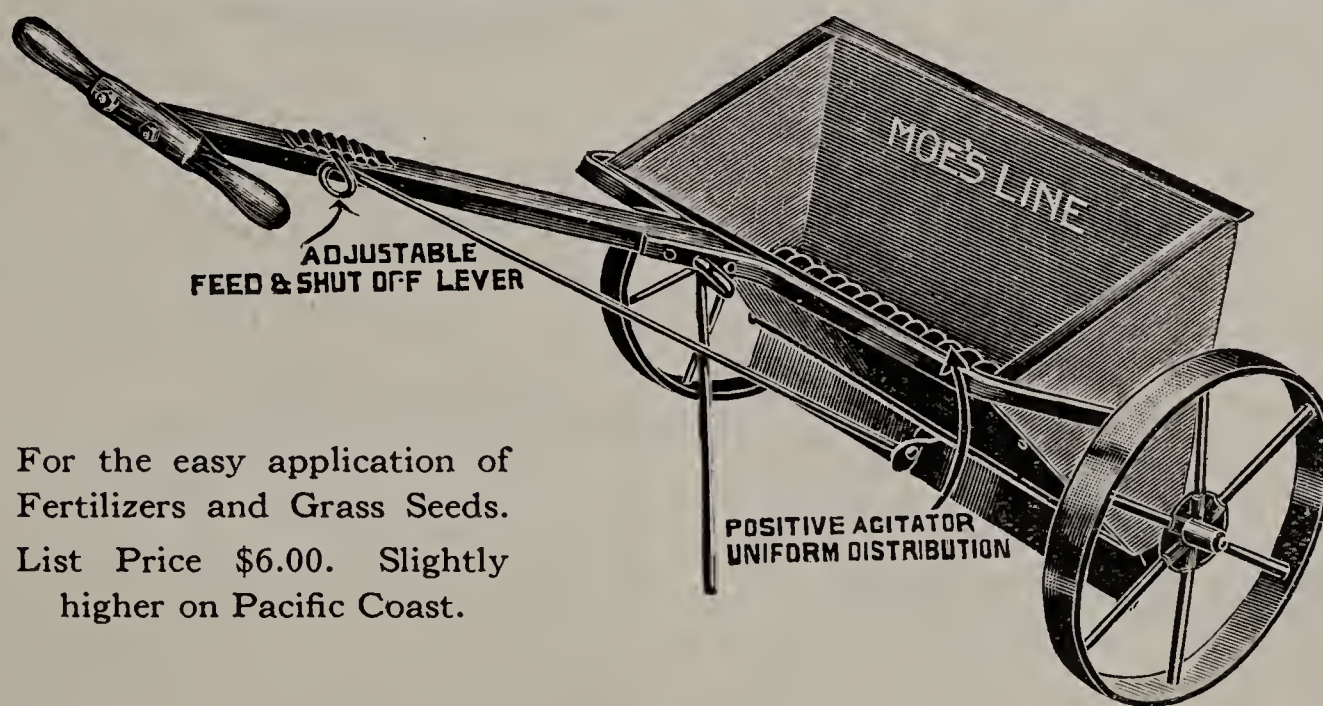
## THE NATURAL GUANO COMPANY

816 River Street

Established 1903

Aurora, Illinois

## Moe's Fertilizer Spreader and Seeder



For the easy application of  
Fertilizers and Grass Seeds.  
List Price \$6.00. Slightly  
higher on Pacific Coast.

No. 500—Spreader and Seeder for lawns and gardens. Easy acting spiral agitator. Quick adjustment of the feed, any desired opening, or complete shut-off. Runs very easily, no hard pushing or tugging, no clogging, and spreads uniformly. May be pushed or pulled as preferred. Can also be used for spreading salt, sand or ashes on icy walks. Hardwood handle, and steel wheels, attractively painted.

Write for Catalog and Prices.

## HOEFT & COMPANY

INCORPORATED

2311 Davis Street

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North Chicago, Ill.

**GET YOUR SHARE**  
of  
**MILLIONS OF DOLLARS SPENT IN THE**  
**SEED TRADE**  
by the  
**40,000,000 BUYERS**  
by  
**ADVERTISING IN SEED WORLD**

**GARDEN AND FIELD IMPLEMENTS AND SUPPLIES—Continued****Garden Tractors—Continued**

Northern Seed & Tractor Co.  
Pittsburgh, Pa.  
Pioneer Mfg. Co.  
West Allis, Milwaukee, Wis.  
Progressive Machinery Co.  
Minneapolis, Minn.  
Shaw Mfg. Co.  
Galesburg, Kans.  
Standard Engine Co.  
Minneapolis, Minn.  
Utilitor Co., The  
Dayton, Ohio

**GRAFTING WAX**

Clark & Son, Walter E.  
Milford, Conn.  
(See Adv. on Page 113)  
Leonard & Son, A. M.  
Piqua, Ohio  
Pugsley & Morrison  
Yuba City, Calif.

**GRINDERS—HAND**

Arcade Mfg. Co.  
Freeport, Ill.  
Brinly Hardy Co.  
Louisville, Ky.  
Hoeft & Co., Inc.  
North Chicago, Ill.  
(See Adv. on Pages 105 and 133)  
Letz Mfg. Co.  
Crown Point, Ind.  
Pratt Mfg. Co., Wm. E.  
Joliet, Ill.

**HARROWS**

Henderson & Co., Peter  
New York, N. Y.

**HOES**

American Fork & Hoe Company  
Cleveland, Ohio  
C-K-R Co.  
Cleveland, Ohio  
Ellis-Keystone Agricultural Works  
Pottstown, Pa.  
(See Adv. on Page 113)  
Geyer Mfg. Co.  
Rock Falls, Ill.  
Gilson Co., J. E.  
Port Washington, Wis.  
Hudson Mfg. Co., H. D.  
Chicago, Ill.  
Leonard & Son, A. M.  
Piqua, Ohio  
Piqua Handle Mfg. Co.  
Piqua, Ohio  
Reichard Mfg. Co., F. H.  
Bangor, Pa.

**HORTICULTURAL TOOLS**

Alliance Mfg. Co., The  
Alliance, Ohio  
American Fork & Hoe Co.  
Cleveland, Ohio  
Bartlett Mfg. Co.  
Detroit, Mich.  
Clyde Cutlery Co., The  
Clyde, Ohio  
C-K-R Co.  
Cleveland, Ohio  
Disston & Sons  
Philadelphia, Pa.  
Hardie Mfg. Co.  
Hudson, Mich.  
Hudson Mfg. Co., H. D.  
Chicago, Ill.  
Johnson, Inc., Wm.  
Newark, N. J.  
Leonard & Son, A. M.  
Piqua, Ohio  
Mount Arbor Nurseries  
Shenandoah, Iowa  
(See Adv. on Page 90)  
New Beeman Tractor Co., The  
Minneapolis, Minn.

Peck, Stow & Wilcox Co.  
Southington, Conn.

**KNIVES (ASPARAGUS)**

Johnson, Inc., Wm.  
Newark, N. J.

**PLANT MARKERS**

S-W Supply Co.  
Girard, Kans.  
Yoho & Hooker  
Youngstown, Ohio  
(See Adv. on Page 111)

**PLANT PROTECTORS**

Calkins Machine Co.  
Spokane, Wash.  
Germain Seed & Plant Co.  
Los Angeles, Calif.  
(See Adv. on Page 145)  
Harris Mfg. Co., A. W.  
Sleepy Eye, Minn.  
Plant Protector Co.  
Rochester, N. Y.  
Straw Products Co. (Shrub)  
Philadelphia, Pa.  
(See Adv. on Pages 129 and 145)

**PLANT SETTERS**

Acmeline, Inc.  
Traverse City, Mich.  
Nagley Transplanter Co.  
Memphis, N. Y.

**PLANT SUPPORTS**

Erickson Co., Inc., C. E.  
Des Moines, Iowa  
Garden Supplies (1929) Ltd.  
Liverpool, England.  
Harris Mfg. Co., A. W. (Bands)  
Sleepy Eye, Minn.  
Henry & Lee  
New York, N. Y.  
Homecraft Specialty Mfg. Co.  
Mattoon, Ill.  
Igoe Bros.  
Brooklyn, N. Y.  
Leadclad Wire Co.  
Moundsville, W. Va.  
McHutchison & Co.  
New York, N. Y.  
Michigan Wire Goods Co.  
Niles, Mich.  
(See Adv. on Page 81)  
Oriole Shop, The  
LaGrange, Ill.  
Peerless Plant Stake Co., The  
Waterloo, Iowa  
Reichard Mfg. Co., F. H.  
Bangor, Pa.  
Star Expansion Bolt Co. (Hooks)  
New York, N. Y.  
S-W Supply Co. (Stakes)  
Girard, Kans.  
Unadilla Silo Co., Inc.  
Unadilla, N. Y.  
United Steel & Wire Co.  
Battle Creek, Mich.  
Vaughan's Seed Store  
Chicago, Ill.  
Woodcraft Co., The  
Dalton, N. Y.

**PLANTERS**

Allen & Co., Inc., S. L.  
Philadelphia, Pa.  
Brinly Hardy Co.  
Louisville, Ky.  
New Beeman Tractor Co., The  
Minneapolis, Minn.  
S. & H. Set Onion Planter Co.  
Pleasant Valley, Iowa  
Straw Products Co. (Bulb)  
Philadelphia, Pa.  
(See Adv. on Pages 129 and 145)

## GARDEN AND FIELD IMPLEMENTS AND SUPPLIES—Continued

## PRUNING IMPLEMENTS

Alliance Mfg. Co., The  
Alliance, Ohio  
Bartlett Mfg. Co.  
Detroit, Mich.  
C-K-R Co.  
Cleveland, Ohio  
**Clark & Son, Walter E.**  
**Milford, Conn.**  
(See Adv. on Page 113)  
Clyde Cutlery Co., The  
Clyde, Ohio  
Disston & Sons, Inc., Henry  
Philadelphia, Pa.  
Graham Co., Inc., John H.  
New York, N. Y.  
**Hoeft & Co., Inc.**  
**North Chicago, Ill.**  
(See Adv. on Pages 105 and 133)  
Johnson, Inc., Wm.  
Newark, N. J.  
J. W. S. Trading Co.  
New York, N. Y.  
Leonard & Son, A. M.  
Piqua, Ohio  
Nagley Transplanter Co.  
Memphis, N. Y.  
Northwest Fence & Wire Works  
Portland, Ore.  
Peck, Stow & Wilcox Co.  
Southington, Conn.  
Rhodes Mfg. Co.  
Grand Rapids, Mich.  
Smith & Son, Inc., Seymour  
Oakville, Conn.  
Village Blacksmith Folks, The  
Watertown, Wis.  
Wiss & Sons, J.  
Newark, N. J.

## RAKES

C-K-R Co.  
Cleveland, Ohio  
**Ellis-Keystone Agricultural Works**  
**Pottstown, Pa.**  
(See Adv. on Page 113)  
Geyer Mfg. Co.  
Rock Falls, Ill.  
Leonard & Son, A. M.  
Piqua, Ohio  
Piqua Handle Mfg. Co.  
Piqua, Ohio  
Sabin Machine Co.  
Cleveland, Ohio

## SEEDERS—BROADCAST

Avery, T. A.  
Indianapolis, Ind.  
Crown Mfg. Co. (Wheelbarrow)  
Phelps, N. Y.  
Cyclone Seeder Co.  
Urbana, Ind.  
**Ellis-Keystone Agricultural Works**  
**Pottstown, Pa.**  
(See Adv. on Page 113)  
Goodell Co.  
Antrim, N. H.  
Pratt Mfg. Co., Wm. E.  
Joliet, Ill.  
Salem Tool Co.  
Salem, Ohio  
Star Seeder Co.  
Shortsville, N. Y.  
Thompson & Sons, O. E. (Wheelbarrow)  
Ypsilanti, Mich.

## SHOVELS

Ames Shovel & Tool Co.  
North Easton, Mass.  
C-K-R Co.  
Cleveland, Ohio  
Leonard & Son, A. M.  
Piqua, Ohio

## SICKLES

Leonard & Son, A. M.  
Piqua, Ohio  
Simmons Hardware Co.  
St. Louis, Mo.

## SOIL SHREDDERS

Kemp Mfg. Co.  
Erie, Pa.

## TOOLS—GARDEN

Alexander Mfg. Co.  
Ames, Iowa  
Allen & Co., Inc., S. L.  
Philadelphia, Pa.  
Alliance Mfg. Co., The  
Alliance, Ohio  
American Fork & Hoe Co.  
Cleveland, Ohio  
Ames Shovel & Tool Co.  
North Easton, Mass.  
Animal Trap Co. of America  
Lititz, Pa.  
Avery & Sons, B. F.  
Louisville, Ky.  
Brinly Hardy Co.  
Louisville, Ky.  
C-K-R Co.  
Cleveland, Ohio  
**Ellis-Keystone Agricultural Works**  
**Pottstown, Pa.**  
(See Adv. on Page 113)  
Empire Plow Co.  
Cleveland, Ohio  
Eureka Planter Co., Ltd.  
Woodstock, Ont., Canada  
Frost-Superior Fence Co.  
Warren, Ohio  
Geyer Mfg. Co.  
Rock Falls, Ill.  
Gilson Co., J. E.  
Port Washington, Wis.  
Henderson & Co., Peter (Harrows)  
New York, N. Y.

**Hoeft & Co., Inc.**  
**North Chicago, Ill.**  
(See Adv. on Pages 105 and 133)  
Hudson Mfg. Co., H. D.  
Chicago, Ill.  
**Imperial Bit & Snap Co.**  
**Racine, Wis.**  
(See Adv. on Page 109)  
Johnson, Inc., Wm.  
Newark, N. J.  
Kingsbury Mfg. Co.  
Keene, N. H.  
Leonard & Son, A. M.  
Piqua, Ohio  
**Michigan Wire Goods Co.**  
**Niles, Mich.**  
(See Adv. on Page 81)

**Norcross & Sons, C. S.**  
**Bushnell, Ill.**  
(See Adv. on Page 109)  
North Wayne Tool Co.  
Oakland, Maine  
Piqua Handle Mfg. Co.  
Piqua, Ohio  
Pratt Mfg. Co., Wm. E.  
Joliet, Ill.  
Progressive Machinery Co.  
Minneapolis, Minn.  
Reichard Mfg. Co., F. H.  
Bangor, Pa.  
Schaible Mfg. Co.  
Elyria, Ohio  
Simmons Hdwe. Co.  
St. Louis, Mo.  
Stanley Works  
New Britain, Conn.  
Union Fork & Hoe Co.  
Columbus, Ohio  
Wheeler Metal Products Corp.  
East Cleveland, Ohio

## TRACTORS

(Also see Garden Tractors, Page 104)  
Advance Rumely Thresher Co., Inc.  
La Porte, Ind.  
Allis-Chalmers Mfg. Co.  
Milwaukee, Wis.  
Bates Machine & Tractor Co.  
Joliet, Ill.  
Case Co., J. I.  
Racine, Wis.

**GARDEN AND FIELD IMPLEMENTS AND SUPPLIES—Concluded****Tractors—Continued**

Caterpillar Tractor Co.  
San Leandro, Calif.  
Cleveland Tractor Co.  
Cleveland, Ohio  
Ford Motor Co.  
Detroit, Mich.  
Gray Tractor Co., The  
Minneapolis, Minn.  
Gravelly Motor Plow & Cultivator Co.  
Dunbar, W. Va.  
Huber Mfg. Co.  
Marion, Ohio  
International Harvester Co.  
Chicago, Ill.  
Kinnard & Sons Mfg. Co.  
Minneapolis, Minn.  
LaCrosse Tractor Co.  
LaCrosse, Wis.  
LeRoy Plow Co.  
LeRoy, N. Y.  
Lawson Mfg. Co., John  
New Holstein, Wis.  
Minneapolis Threshing Mach. Co.  
Hopkins, Minn.  
Minneapolis-Moline Power Implement Co.  
Minneapolis, Minn.  
Monarch Tractors Corp.  
Springfield, Ill.  
Northern Seed & Tractor Co.  
Pittsburgh, Pa.  
Rock Island Plow Co.  
Rock Island, Ill.  
Rogers Tractor & Trailer Co.  
Albion, Pa.  
Scott Co., I. W.  
Pittsburgh, Pa.  
Shaw Mfg. Co.  
Galesburg, Kans.  
Toro Mfg. Co.  
Minneapolis, Minn.  
Utilitor Co., The  
Dayton, Ohio  
Wetmore Tractor Mfg. Co.  
Sioux City, Iowa  
Wisconsin Farm Tractor Co.  
Sauk City, Wis.

**TRANSPLANTERS**

Nagley Transplanter Co.  
Memphis, N. Y.  
New Idea Spreader Co.  
Coldwater, Ohio  
Wiard Plow Co.  
Batavia, N. Y.

**TROWELS**

Arcade Mfg. Co.  
Freeport, Ill.  
C-K-R Co.  
Cleveland, Ohio

**Hoeft & Co., Inc.  
North Chicago, Ill.**

(See Adv. on Pages 105 and 133)

Johnson, Inc., Wm.  
Newark, N. J.  
Leonard & Son, A. M.  
Piqua, Ohio  
Pratt Mfg. Co., Wm. E.  
Joliet, Ill.

**VEGETABLE WASHERS**

Felins Tying Machine Co.  
Milwaukee, Wis.  
Pioneer Mfg. Co.  
West Allis, Milwaukee, Wis.

**WEEDERS**

Arcade Mfg. Co.  
Freeport, Ill.  
Barker Mfg. Co.  
David City, Neb.  
C-K-R Co.  
Cleveland, Ohio

**Ellis-Keystone Agricultural Works  
Pottstown, Pa.**

(See Adv. on Page 113)

Geyer Mfg. Co.  
Rock Falls, Ill.  
Gilson Co., J. E.  
Port Washington, Wis.

**Hoeft & Co., Inc.  
North Chicago, Ill.**

(See Adv. on Pages 105 and 133)

Hudson Mfg. Co., H. D.  
Chicago, Ill.

**Imperial Bit & Snap Co.  
Racine, Wis.**

(See Adv. on Page 109)

Johnson, Inc., Wm.  
Newark, N. J.  
Leonard & Son, A. M.  
Piqua, Ohio

**Michigan Wire Goods Co.  
Niles, Mich.**

(See Adv. on Page 81)

**Norcross & Sons, C. S.  
Bushnell, Ill.**

(See Adv. on Page 109)

Reichard Mfg. Co., F. H.  
Bangor, Pa.  
Standard Ventilator Co.  
Lewisburg, Pa.  
Ulrich Mfg. Co.  
Rock Falls, Ill.

**WHEELBARROWS**

Defiance Box Co., The  
Defiance, Ohio  
Red Star Products Corp.  
Cleveland, Ohio

**GREENHOUSE AND FLORAL SUPPLIES****FLORISTS' SUPPLIES**

Almo Trading & Importing Co.  
New York, N. Y. (Flower Vases)  
American Import Co., The  
San Francisco, Calif.  
Barnard Co., W. W.  
Chicago, Ill.  
**Bird & Son**  
East Walpole, Mass.  
(See Adv. on Page 111)  
**Chipman Chem. Co., Inc.**  
Bound Brook, N. J.  
(See Adv. on Page 99)  
Co-operative Flint Glass Co.  
Beaver Falls, Pa.  
(Hyacinth Glasses)  
Growell Pot Co., The  
New York, N. Y.  
Houchin Co., Thos. W.  
Jersey City, N. J.

**Lewis Co., G. B.  
Watertown, Wis.**

(See Adv. on Page 143)

Poehlmann Bros. Co.  
Morton Grove, Ill.  
Randall Co., A. L.  
Chicago, Ill.  
Smith & Young Co.  
Indianapolis, Ind.

**Uniform Products Co.  
New York, N. Y.****Wilson, Inc., Andrew  
Springfield, N. J.**

(See Adv. on Page 121)

Zane Pottery Co.  
South Zanesville, Ohio

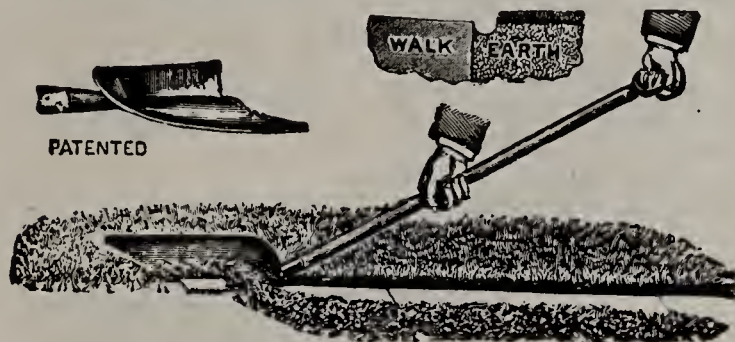
**FLOWER BOXES**

Express Body Corp.  
Crystal Lake, Ill.  
Homecraft Specialty Mfg. Co.  
Mattoon, Ill.

# PROFITABLE ITEMS FOR SEEDMEN

## LAWN EDGE TRIMMER No. 136

A practical tool, needed by every home owner. Plows a clean "U" shaped trench, delivering the cutting on the walk automatically as trimmer is pushed along. No other tool like it.



## WEED PULLER No. 96

A scientifically constructed weed puller with an easy grip handle. Operates easily and efficiently without destroying the lawn. Made of the finest grade materials.

## COMBINATION CULTIVATOR HOE No. 125

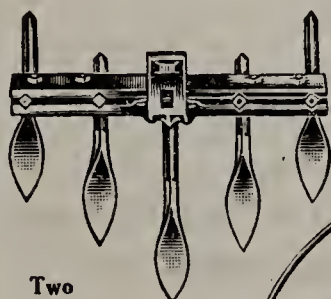
A "Six-in-One" tool—used for hoeing, cultivating, dandelion cutting, dandelion rake, drill digger for sowing seeds, weeding and many other uses.

**IMPERIAL BIT & SNAP CO.**

RACINE,

WISCONSIN

## The New Norcross



Two Sizes  
8" and  
10"

## New Norcross GARDEN GROWER

*Mulcher — Weeder  
Cultivator — Plow*

Built of finest materials, this sturdy handsome machine has many superior features of value—especially the 5-prong (Norcross) Cultivator and large Shovel attachments—exclusively "Norcross".

We also specialize on Hand Cultivators and Weeders for both garden and lawn. Write for circulars and *New Low prices* for 1933.

**C.S. NORCROSS & SONS, Mfr's.**  
Bushnell, Ill. U. S. A.

*Seedmen, Dealers, Distributors*

# NEW SALES OPPORTUNITY

**SUPERIOR LAWN EDGER**, a new, fast-selling, money-making item. A lawn edger not in name only, but ACTUALLY DOES easily and efficiently solve that vexing problem.

**Just Introduced! Phenomenal Reception. A High Grade Tool**

**RETAIL PRICE \$2<sup>00</sup>**

Everyone delighted! No wonder. It's expertly made of very best materials. Cutting section is high-carbon steel. (Sharpened to keen knife-like edge.) Steel ball mounted roller. Best quality Northern Ash handle.

Wholesalers and Retailers pleased with our proposition. You will be, too.

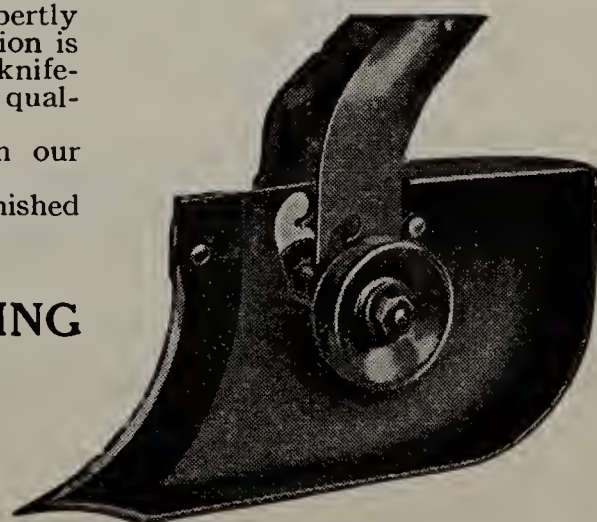
Leaflets For Envelope Stuffers — Furnished upon Request.

*Write for Prices and Discounts*

**SUPERIOR METAL SPINNING  
AND MFG. COMPANY**

Dept. SWA

4036 Fitch Road, TOLEDO, OHIO  
U. S. A.



## GREENHOUSE AND FLORAL SUPPLIES—Continued

## Flower Boxes—Continued

- Hudson Mfg. Co., H. D.  
Chicago, Ill.  
Neidinger Co., Jos. G.  
Philadelphia, Pa.  
Raedlein Basket Co.  
Chicago, Ill.  
Savo Mfg. Co.  
Chicago, Ill.  
Sprauger & Johnson  
Atlantic, Iowa  
Success Mfg. Co.  
Gloucester, Mass.  
Unadilla Silo Co., Inc.  
Unadilla, N. Y.  
Woodcraft Co., The  
Dalton, N. Y.  
**Yoho & Hooker (Cypress)**  
Youngstown, Ohio  
(See Adv. on Page 111)  
Zane Pottery Co. (Pottery Boxes)  
So. Zanesville, Ohio

## GLASS

- Metropolitan Greenhouse Mfg. Corp.  
Brooklyn, N. Y.  
**Yoho & Hooker**  
Youngstown, Ohio  
(See Adv. on Page 111)

## GLASS SUBSTITUTE

- Acetol Products, Inc.  
New York, N. Y.  
Allen Brothers, Inc.  
Omaha, Nebr.  
**Fleming Bros.**  
Chicago, Ill.  
(See Adv. on Page 111)  
Flex-o-Glass Mfg. Co.  
Chicago, Ill.  
**Hoelt & Co., Inc.**  
North Chicago, Ill.  
(See Adv. on Pages 105 and 133)  
New York Wire Cloth Co.  
New York, N. Y.  
Turner Bros.  
Bladen, Nebr.

## GREENHOUSE MATERIAL

- Callahan Co., T. J.  
Dayton, Ohio  
Glidden Co., The (Paint)  
Cleveland, Ohio  
**Hammond's Paint & Chemical Works**  
Beacon, N. Y.  
(See Adv. on Page 123)  
Metropolitan Greenhouse Mfg. Corp.  
Brooklyn, N. Y.  
New York Wire Cloth Co.  
New York, N. Y.  
**Yoho & Hooker**  
Youngstown, Ohio  
(See Adv. on Page 111)

## HOT BED SASH

- Callahan Co., T. J.  
Dayton, Ohio  
Foley Greenhouse Mfg. Co.  
Chicago, Ill.  
Gordon-Van Tine Co.  
Davenport, Iowa  
Metropolitan Greenhouse Mfg. Corp.  
Brooklyn, N. Y.  
New York Wire Cloth Co.  
New York, N. Y.  
**Yoho & Hooker**  
Youngstown, Ohio  
(See Adv. on Page 111)

## HOT BED SUPPLIES

- Cleveland Textile & Bag Co.  
Cleveland, Ohio  
Electromaster, Inc. (Heating Element)  
Detroit, Mich.  
Metropolitan Greenhouse Mfg. Corp.  
Brooklyn, N. Y.  
Palmer Bros.  
New London, Conn.  
Uniform Products Co.  
New York, N. Y.

## LABELS—PLANT

- Arcade Mfg. Co.  
Freeport, Ill.  
Ball & Socket Mfg. Co.  
West Cheshire, Conn.  
Haas & Sons, Jos.  
Newport, Ky.  
Peerless Plant Stake Co., The  
Waterloo, Iowa  
Smock, L. J. (Wood)  
Cochran, Pa.  
Stewart Co., Chas.  
Roseland, N. J.  
**Yoho & Hooker**  
Youngstown, Ohio  
(See Adv. on Page 111)

## MOSS, PEAT

- American Soil Sponge Selling Co.  
New York, N. Y.  
Atkins & Durbrow, Inc.—(Horticultural)  
New York, N. Y.  
Bienenfeld Importing Corp.  
Chicago, Ill.  
Bon Arbor Chemical Co.  
Paterson, N. J.  
Bremermann & Co., Ernst  
(Peat Moss Manure Pots)  
New York, N. Y.  
Dickinson Co., The Albert  
Chicago, Ill.  
Harvey Seed Co. (Grain & Horticultural)  
Buffalo, N. Y.  
Ideal Peat Moss Co. (Horticultural)  
New York, N. Y.  
Kier Peat Corp.  
Morrison, Ill.  
Loewith, Inc., Julius  
New York City, N. Y.  
McHutchison & Co.  
New York, N. Y.  
**Philadelphia Seed Co.**  
Philadelphia, Pa.  
(See Adv. on Page 20)  
**St. Louis Seed Co.**  
St. Louis, Mo.  
(See Adv. on Page 59)  
Southern Peat Moss Co.  
Forsyth, Georgia  
Templin-Bradley Co., The  
Cleveland, Ohio  
U. S. Trading Co., Importers  
Jacksonville, Fla.  
Vaughan's Seed Store  
Chicago, Ill.

## MOSS, SPHAGNUM

- American Bulb Co.  
Chicago, Ill.  
(See Adv. on Page 38)  
Vaughan's Seed Store  
Chicago, Ill.  
**Williamson, Garfield**  
New York, N. Y.  
(See Adv. on Page 60)  
Wisconsin Moss Co.  
Wisconsin Rapids, Wis.

## POTS—FLOWER

- Bellevue Clay Products Co.  
Bellevue, Iowa  
**Bird & Son**  
East Walpole, Mass.  
(See Adv. on Page 111)  
Central Fibre Co., Inc.  
South Gardiner, Maine  
Elverson Pottery Co., W. H.  
New Brighton, Pa.  
Harris Mfg. Co., A. W.  
Sleepy Eye, Minn.  
Hews & Co., Inc., A. H.  
Cambridge, Mass.  
Hilfinger Bros.  
Fort Edward, N. Y.  
Ionia Pottery Co.  
Ionia, Mich.  
Kahler Pottery Co.  
Louisville, Neb.  
Keller Pottery Co., Geo.  
Chicago, Ill.

# YOHOS PERMA MARKER



Makes a permanent record on your plant labels

or stakes. An excellent item for

## CATALOG AND COUNTER SALES

Write for sample and Dealer discounts.

Wood Labels  
Hot Bed Sash  
Flats  
Greenhouses

**YOH &  
HOOKER**  
Youngstown, Ohio

# BIRD NEPONSET BLACK POTS for Growing

are superior to any other pot on the market for the actual growing of plants.



Tests have proved this new pot encourages maximum growth. Made of specially treated waterproof paper.

Plants in these pots require less watering and attention.

*Economical—Light in weight*

Set up ready to use in standard sizes

### NEPONSET RED POTS

are the accepted Standard for Shipping and Miscellaneous Use.

Decorative Pot Covers for Retail Trade.  
Earth Bands for Growers.

Write to your dealer or to us for samples and prices.

**BIRD & SON, Inc.**  
East Walpole, Mass.

# DEALERS!

Pick up quick PROFITS  
with



Here is something right down your alley — a natural profit-maker for you. Everyone doing business with you is an actual prospect for Lite-O-Glas. It is flexible — shatter-proof — and gives more warmth and better protection than glass — yet costs about one-tenth as much.

## Cash in on Nation-Wide Sweep to Lite-O-Glas

No poultry, flower or vegetable raiser can afford to be without Lite-O-Glas for new building or replacements. Tacked on in a jiffy—it lets in laying-stimulating, health-promoting violet rays—yet keeps cold out better than glass. No wonder sales are spreading like wild-fire.

Remember, Lite-O-Glas stands alone in quality; finest treatment, strongest cloth base—and finished with the most perfect impregnating process ever developed.

You can sell it like hot cakes—by the roll, or a few yards at a time—on the famous Fleming “Satisfaction or Money Back Guarantee.”

*Mail coupon for “Prove-all” Sample  
and exceptional dealers’ price proposition*

### -----COUPON-----

**FLEMING BROS.,**  
DA-50 Union Stock Yards,  
Chicago, Ill.

Please send me, without obligation, sample of Lite-O-Glas and details of your exceptional dealers’ price proposition.

Name.....

Address.....

**GREENHOUSE AND FLORAL SUPPLIES—Concluded****Pots Flower—Continued**

Keller Pottery Co.  
Norristown, Pa.  
Louisville Pottery Co., Inc.  
Louisville, Ky.  
Milwaukee Pottery Co.  
Milwaukee, Wis.  
Mono Service Co.  
Newark, N. J.  
Peters & Reed Pottery Co.  
Zanesville, Ohio  
Pierce, E. Allen  
Waltham, Mass.  
Pittsburg Pottery Co.  
Pittsburg, Kan.  
Progressive Clay Co.  
Philadelphia, Pa.  
Red Wing Union Stoneware Co.  
Red Wing, Minn.  
Richmond Cedar Works (Cedar Tubs)  
Richmond, Va.  
Rochelle & Sons, F. W.  
Chester, N. Y.  
Roseville Pottery Co.  
Zanesville, Ohio  
St. Louis Pottery & Mfg. Co.  
St. Louis, Mo.  
Springfield Clay Mfg. Co.  
Springfield, Ohio  
Syracuse Pottery Co.  
Syracuse, N. Y.  
Uhl Pottery Co.  
Evansville, Ind.  
Western Stoneware Co.  
Monmouth, Ill.  
Zane Pottery Co.  
So. Zanesville, Ohio

**POT COVERS—FLOWER**

**Bird & Son**  
East Walpole, Mass.  
(See Adv. on Page 111)

**POT SAUCERS—FLOWER**

Almo Trading & Importing Co.  
New York, N. Y.  
**Bird & Son**  
East Walpole, Mass.  
(See Adv. on Page 111)  
Brush Pottery Co.  
Zanesville, Ohio

Hilfinger Bros.  
Fort Edward, N. Y.  
Mono Service Co.  
Newark, N. J.  
Syracuse Pottery Co., Inc.  
Syracuse, N. Y.  
Zane Pottery Co.  
Zanesville, Ohio

**RAFFIA**

American Imports Co., The (Mats)  
San Francisco, Calif.  
Kilgore Seed Co.  
Plant City, Fla.  
King & Walters, Inc.  
New York, N. Y.  
Loewith, Inc., Julius  
New York City, N. Y.  
McHutchison & Co.  
New York City, N. Y.  
Meehan Co., Thomas B.  
Dresher, Pa.  
Schoorl, Adrian J.  
San Francisco, Cal.

**SEED AND PLANT FORCERS**

American Fork & Hoe Co.  
Cleveland, Ohio  
Virginia-Carolina Chemical Corp.  
Richmond, Va.

**SEED FLATS**

Yoho & Hooker (Cypress)  
Youngstown, Ohio  
(See Adv. on Page 111)

**TRANSPLANTING BOXES**

Belle City Basket Co.  
Racine, Wis.  
**Bird & Son**  
East Walpole, Mass.  
(See Adv. on Page 111)  
Burlington Willowware Co.  
Burlington, Iowa

**TREE AND PLANT TUBS**

Richmond Cedar Works  
Richmond, Va.

**INOCULANTS AND PLANT FOODS****INOCULANTS**

Dickinson Co., The Albert  
Chicago, Ill.  
Earp-Thomas Laboratories, Inc.  
Bloomfield, N. J.  
Edwards Laboratory, The  
Lansing, Mich.  
**Farming Aids, Inc.**  
Milwaukee, Wis.  
(See Adv. on Page 119)  
Franklin Laboratories, Inc.  
Columbus, Ohio  
Kalo Company  
Quincy, Ill.  
**McQueen Bacteria Co.**  
Baltic, Ohio  
(See Adv. on Page 117)  
Nitra-Germ Co.  
Savannah, Ga.  
**Nitragin Co., The**  
Milwaukee, Wis.  
(See Adv. on Page 118)  
Standard Inoculation Co.  
Troy, Pa.  
**Stimuplant Laboratories, Inc.**  
Long Island City, N. Y.  
(See Adv. on Page 117)  
Urbana Laboratories  
Urbana, Ill.

**PLANT FOODS**

American Agricultural Chem. Co.  
New York, N. Y.

Armour Fertilizer Works  
Chicago, Ill.  
Barrett Co., The  
New York City, N. Y.  
Bon Arbor Chemical Co.  
Paterson, N. J.  
**Carus Chemical Co.**  
La Salle, Ill.  
(See Adv. on Page 103)  
Darling & Co.  
Chicago, Ill.  
Electric Sprayit Co.  
South Bend, Ind.  
**Grasselli Chemical Co., The**  
Cleveland, Ohio  
(See Adv. on Second Cover)  
International Agricultural Corp.  
New York, N. Y.  
Jax Plant Food Co.  
Birmingham, Ala.  
J. & J. Tool & Machine Co.  
Chicago, Ill.  
Koppers Products Co.  
Pittsburgh, Pa.  
Magnesia Products Co.  
Milwaukee, Wis.  
National Plant Food Co.  
Eau Claire, Wis.  
Oyama Products Co.  
Newburgh, N. Y.  
Plantaid Mfg. Co.  
Chicago, Ill.

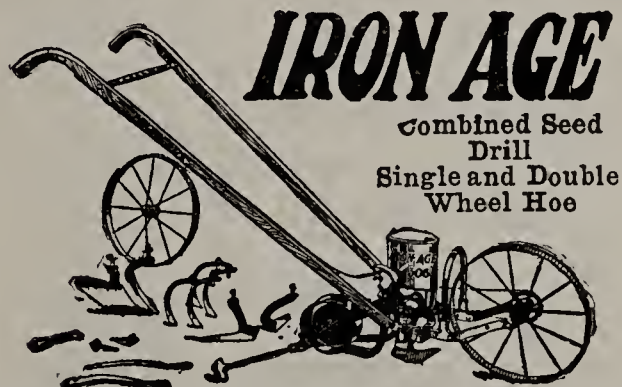
**We Make the  
Dependable  
*IRON AGE*  
Garden Tools**

Used by Home and  
Truck Gardeners  
for Two Generations

Also True-Fitting Parts for all Iron Age  
Garden Tools now in use.

*Write for prices and discounts*

**ELLIS KEYSTONE  
AGRICULTURAL WORKS  
POTTSTOWN, PENNSYLVANIA**



**Trowbridge  
GRAFTING-WAX**

*"Oldest and Best"*

is the oldest hand or brush grafting wax on the market. Endorsed by the best authorities in horticulture the country over and is known to be possessed of the most even consistency and elasticity of any. It is used for grafting, budding, top working, etc., of all fruit and ornamental trees, shrubs and vines. Put up in neat, convenient 1 lb., ½ lb., and ¼ lb. sizes.

**Clark's  
PARAPIN-WAX**

*(Trade Mark)*

The original elastic Paraffin coating material

Parapin-Wax is made up in three melting point mixtures covering the following uses in any climate:—

A dipping material for *Rose Bushes—Ornamental trees and shrubs—Bulbs—Grafting and Budding—Coating for Rodents and Borers—Reduces Sun scald.*

*Manufacturers & Wholesalers*

**Walter E. Clark & Son, Milford, Conn.**

*Headquarters for  
Melter and Dip Tank Equipment  
Pruning, Grafting and Budding Tools*

For Your

**PROTECTION**

and Ours

**USE THE STICKERS**

**IN THE BACK OF  
THE BOOK FACING  
THE BACK COVER**

**INOCULANTS AND PLANT FOODS—Concluded****Plant Foods—Continued**

Plantabbs Corporation  
Baltimore, Md.  
Premier Poultry Manure Co.  
Chicago, Ill.  
**Pulverized Manure Co.**  
Chicago, Ill.  
(See Adv. on Page 103)  
Reading Bone Fertilizer Co.  
Reading, Pa.  
Rogers & Hubbard  
Portland, Conn.  
Smith Agricultural Chemical Co.  
Columbus, Ohio  
Stadler Products Co.  
Cleveland, Ohio  
**Stimulant Laboratories, Inc.**  
Long Island City, N. Y.  
(See Adv. on Page 117)

Swift & Co.  
Chicago, Ill.  
Synthetic Nitrogen Products Corp.  
New York, N. Y.  
Templin-Bradley Co., The  
Cleveland, Ohio  
Tennessee Corporation  
New York, N. Y.  
Virginia-Carolina Chem. Corp.  
Richmond, Va.  
White Rose Plant Food Co.  
York, Pa.  
**Williamson, Garfield**  
New York, N. Y.  
(See Adv. on Page 60)  
**Wilson, Inc., Andrew**  
Springfield, N. J.  
(See Adv. on Page 121)

**LAWN IMPLEMENTS AND SUPPLIES****GARDEN HOSE**

Atlantic Mfg. Co.  
Wilmington, Del.  
Diamond Rubber Co., Inc.  
Akron, Ohio  
Electric Hose & Rubber Co.  
Wilmington, Del.  
Gates Rubber Co.  
Denver, Colo.  
Goodrich Rubber Co.  
Akron, Ohio  
Goodyear Rubber Co.  
Akron, Ohio  
Hayes Pump & Planter Co.  
Galva, Ill.  
Leonard & Son, A. M.  
Piqua, Ohio  
Metropolitan Greenhouse Mfg. Corp.  
Brooklyn, N. Y.

**GRASS SHEARS**

Alliance Mfg. Co.  
Alliance, Ohio  
Leonard & Son, A. M.  
Piqua, Ohio  
Peck Stow & Wilcox Co.  
Southington, Conn.  
Smith & Son, Inc., Seymour  
Oakville, Conn.  
Wheeler Metal Products Corp.  
East Cleveland, Ohio

**HEDGE TRIMMERS**

C-K-R Co.  
Cleveland, Ohio  
Clyde Cutlery Co., The  
Clyde, Ohio  
Detco Mfg. Co.  
Oaks, Montg. Co., Pa.  
Disston & Sons, Inc., Henry  
Philadelphia, Pa.  
Jaeger Prod. Co.  
Trenton, N. J.  
Leonard & Son, A. M.  
Piqua, Ohio  
Skillsaw, Inc. (Electric)  
Chicago, Ill.  
Smith & Son, Inc., Seymour  
Oakville, Conn.  
Village Blacksmith Folks, The  
Watertown, Wis.  
Wallington Machine Co., Inc. (Electric)  
Passaic, N. J.

**HOSE NOZZLES**

Electric Sprayit Co.  
South Bend, Ind.  
Smith & Co., D. B.  
Utica, N. Y.

**HOSE REELS**

Anker-Holth Mfg. Co.  
Port Huron, Mich.  
C-K-R Co.  
Cleveland, Ohio

**LAWN EDGE TRIMMERS**

Allen & Co., Inc., S. L.  
Philadelphia, Pa.  
C-K-R Co.  
Cleveland, Ohio  
**Imperial Bit & Snap Co.**  
Racine, Wis.  
(See Adv. on Page 109)  
Leonard & Son, A. M.  
Piqua, Ohio  
Miller & Sons Co.  
Waterloo, Iowa  
Philadelphia Lawn Mower Co., Inc.  
Philadelphia, Pa.  
**Superior Metal Spinning & Mfg. Co.**  
Toledo, Ohio  
(See Adv. on Page 109)

**LAWN FURNITURE AND DECORATIONS**

Brush Pottery Co. (Fountains—Vases)  
Zanesville, Ohio  
Buffalo Wire Works Co., Inc.  
Buffalo, N. Y.  
Express Body Corp.  
Crystal Lake, Ill.  
Hartman-Sanders  
Chicago, Ill.  
Homecraft Specialty Mfg. Co.  
Mattoon, Ill.  
Humboldt Redwood Lumber Co.  
Chicago, Ill.  
Ideal Garden & Specialty Co.  
Milan, Mich.  
Logan Co.  
Louisville, Ky.  
Northwestern Fence & Wire Works  
Portland, Ore.  
Novelty Iron Works  
Sterling, Ill.  
Randall Co., A. L.  
Chicago, Ill.  
Smith Wire & Iron Wks., F. P.  
Chicago, Ill.  
Staples Foundry Co.  
Mount Vernon, Ind.  
Testrite Instrument Co.  
New York, N. Y.  
Unadilla Silo Co., Inc.  
Unadilla, N. Y.  
Western Stoneware Co.  
Monmouth, Ill.  
Woodcraft Co., The  
Dalton, N. Y.  
**Yoho & Hooker (Trellis)**  
Youngstown, Ohio  
(See Adv. on Page 111)

**LAWN MOWERS**

American Lawn Mower Co.  
Muncie, Ind.  
Blair Mfg. Co.  
Springfield, Mass.

**LAWN IMPLEMENTS AND SUPPLIES—Concluded****Lawn Mowers—Continued**

Brinly Hardy Co.  
Louisville, Ky.  
Clipper Mfg. Co.  
Dixon, Ill.  
Coldwell Lawn Mower Co.  
Newburgh, N. Y.  
Cooper Mfg. Co. (Power)  
Marshalltown, Iowa  
Cushman Motor Works (Power)  
Lincoln, Nebr.  
Dille & McGuire Mfg. Co.  
Richmond, Ind.  
Eclipse Lawn Mower Co.  
Prophetstown, Ill.  
Elwood Lawn Mower Mfg. Co.  
Elwood, Ind.  
Gilson-Bolens Mfg. Co. (Power)  
Port Washington, Wis.  
Granite State Mowing Machine Co.  
Hinsdale, N. H.  
Henley Lawn Mower Co.  
Richmond, Ind.  
Hudson Mfg. Co., H. D.  
Chicago, Ill.  
Ideal Power Lawn Mower Co. (Power)  
Lansing, Mich.  
Jacobsen Mfg. Co. (Power)  
Racine, Wis.  
Milbradt Mfg. Co. (Power)  
St. Louis, Mo.  
Modern Machine Works, Inc. (Power)  
Milwaukee, Wis.  
Moto-Mower Co. (Power)  
Detroit, Mich.  
New Beeman Tractor Co., The (Power)  
Minneapolis, Minn.  
Philadelphia Lawn Mower Co., Inc.  
Philadelphia, Pa.  
Roseman Tractor Mower Co.  
Evanston, Ill.  
Shaw Mfg. Co. (Power)  
Galesburg, Kansas  
Stearns & Co., E. C.  
Syracuse, N. Y.  
Toro Mfg. Co.  
Minneapolis, Minn.  
Townsend & Co., S. P.  
Bloomfield, N. J.  
Worcester Lawn Mower Co.  
Worcester, Mass.  
Worthington Mower Co.  
Stroudsburg, Pa.

**LAWN ROLLERS**

Caledonia Bean Harvester Works  
Caledonia, N. Y.  
Graham & Co., John H.  
New York City, N. Y.  
Leonard & Son, A. M.  
Piqua, Ohio  
Toro Mfg. Co.  
Minneapolis, Minn.  
Wilder-Strong Implement Co.  
Monroe, Mich.  
Worthington Mower Co.  
Stroudsburg, Pa.

**LAWN SPRINKLERS**

Alsteel Mfg. Co.  
Battle Creek, Mich.  
Armstrong Electric & Mfg. Corp.  
Huntington, W. Va.  
B. & J. Mfg. Co.  
Springfield, Ohio

Chicago Flexible Shaft Co.  
Chicago, Ill.  
Coldwell Lawn Mower Co.  
Newburgh, N. Y.  
Dayton Irrigation Co.  
Dayton, Ohio  
Diamond Rubber Co.  
Akron, Ohio  
Double Rotary Sprinkler Co.  
Kansas City, Mo.  
Hardware Supply Co.  
Grand Rapids, Mich.  
Imperial Bit & Snap Co.  
Racine, Wis.  
(See Adv. on Page 109)  
J. & J. Tool & Machine Co.  
Chicago, Ill.  
Kopcsay, Jos.  
South Bend, Ind.  
Leonard & Son, A. M.  
Piqua, Ohio  
March Automatic Irrigation Co.  
Muskegon, Mich.  
Peck Bros. & Co.  
New Haven, Conn.  
Smith & Co., D. B.  
Utica, N. Y.  
White Showers, Inc.  
Detroit, Mich.  
Wilgus Mfg. Co.  
Los Angeles, Calif.  
X. L. Mfg. Co.  
Chicago, Ill.

**LIME**

International Agricultural Corp.  
New York, N. Y.  
Marble Cliff Quarries Co.  
Columbus, Ohio

**MOLE AND ANIMAL TRAPS**

Abington Trap Co.  
Abington, Ill.  
Animal Trap Co. of America  
Lititz, Pa.  
Grelle, C. E. (Mole)  
Portland, Ore.  
(See Adv. on Page 143)  
Macabee Gopher Trap Co. (Gopher)  
Los Gatos, Calif.  
Michigan Wire Goods Co.  
Niles, Mich.  
(See Adv. on Page 81)  
Pratt Co., Wm. E.  
Joliet, Ill.  
Roper Co., J. R.  
San Leandro, Calif.  
Schroeter Bros. Hdwe. Co. (Mole)  
St. Louis, Mo.

**NOZZLE HOLDERS**

Anker Holth Mfg. Co.  
Port Huron, Mich.

**RAKES—BAMBOO**

American Import Co., The  
San Francisco, Calif.

**ROCK GARDEN NOVELTIES**

Brush Pottery Co. (Frogs, Turtles, etc.)  
Zanesville, Ohio  
Novelty Iron Works  
Sterling, Ill.  
Western Stoneware Co.  
Monmouth, Ill.

**SOD CUTTERS**

Lane & Son, M. R.  
Ardmore, Penna.

**Let SEED WORLD Service Bureau help you.  
No charge. Just write us and we will do the rest.  
SEED WORLD, 325 W. Huron St., Chicago**

# LEGUME INOCULATION

**G**ROWERS of legume crops find that seed inoculation pays. It pays for the following reasons: (1) It enables plants to secure nitrogen from the air and passes it on to the plants for their use. (2) It prevents crop failures. Very often a legume crop is a complete failure if the seed has not been inoculated. (3) It increases crop yields; in some cases several hundred per cent. (4) It improves the crop quality. (5) It enriches the soil.

## Reliable Dealers

There are many reliable manufacturers of legume inoculation material. It is not necessary any longer to use cultures from state agricultural experiment stations, for these commercial concerns have reliable and tested cultures. These firms employ bacteriologists who have made this line of work a life-long study. Each culture for the different kinds of legumes is carefully prepared and when properly mixed with the seeds to be planted the desired inoculation results.

These commercial cultures are inspected and tested from time to time by state and government officials, which tends to keep manufacturers careful as to the potency of their product. As a result of the painstaking manner in which these legume

cultures are manufactured, some excellent cultures are now available.

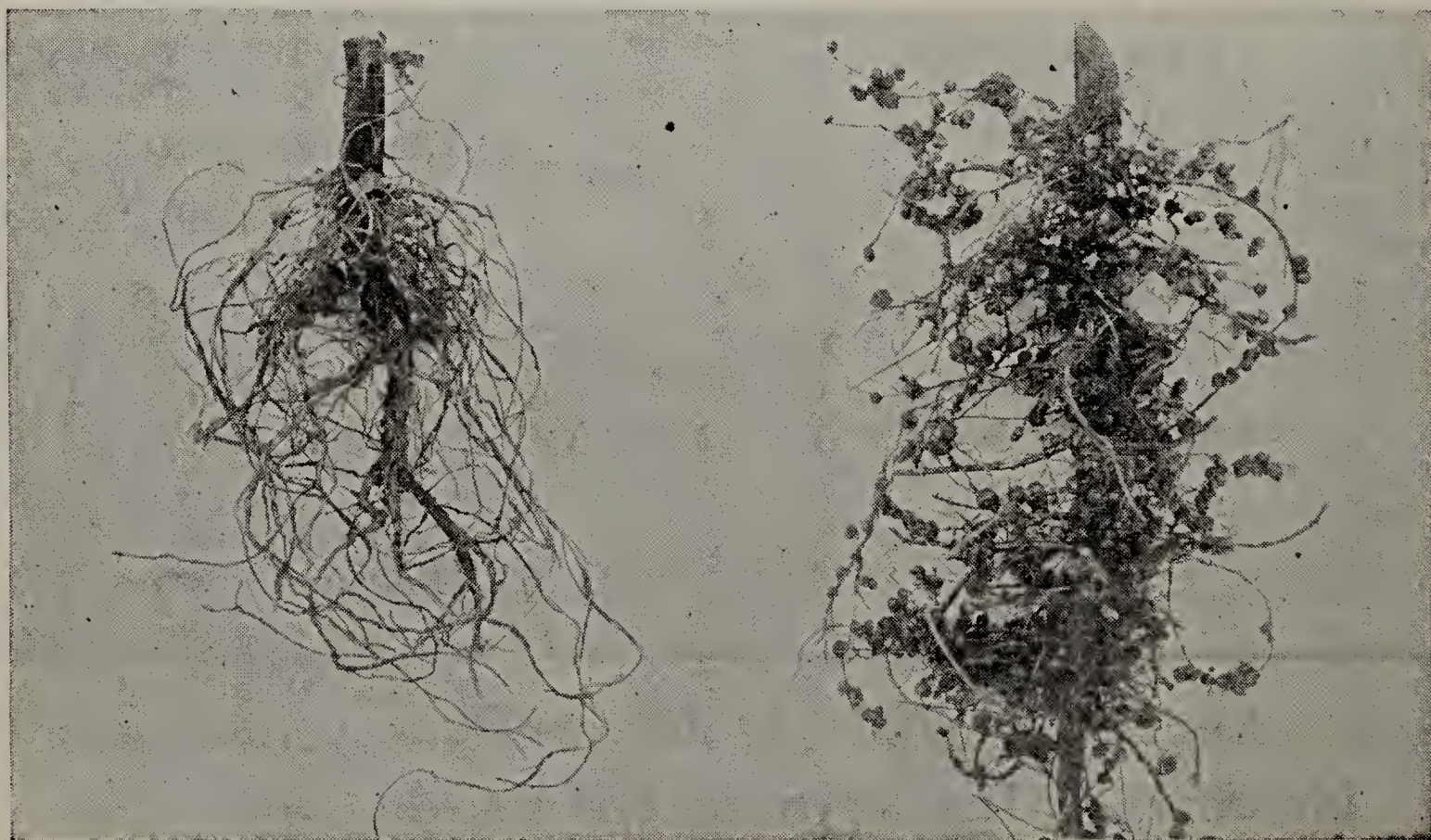
## Increased Demand

The demand for inoculants is increasing each year. Farmers are slowly but surely finding out that inoculating seed pays. This demand is bound to increase as time goes on and there is little question but that the demand will be doubled in a very short time.

Due to this increased interest in inoculation seed dealers are finding that it pays to sell well known brands of inoculants.

The margin of profit obtained from the retailing of legume inoculants is very attractive. Seedsmen should put special stress on their sales efforts to urge all buyers of legume seed to purchase a supply of inoculants sufficient to treat the seed they buy.

The manufacturers of legume inoculants put up their products in attractive containers thus making them practical for display purposes. They also cooperate with seed dealers in supplying them with window display material, electros, and advertising copy for seed catalogs and local newspaper advertising. In fact,



**Left—Roots of Plant Not Inoculated. Right—Roots of Plant Inoculated Showing Nodules.**

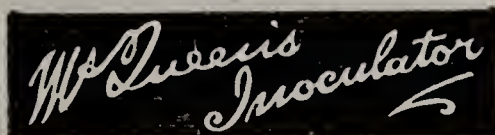


## Attention Dealers

Protect yourself and your customers by selling an Inoculator that:

- (1) is ABSOLUTELY GUARANTEED to give SATISFACTORY PERFORMANCE.
- (2) Every Farmer can AFFORD to use.
- (3) Is NATIONALLY ADVERTISED.
- (4) Is CONVENIENT to USE.
- (5) Allows you LARGE PROFITS.
- (6) Is DATED for your protection.
- (7) Does NOT MOLD or SPOIL.
- (8) Does not require costly and troublesome yearly returns.

Compare McQUEEN'S with any other Inoculant as to QUALITY—PRICE—or CONVENIENCE and see why our Dealer's are Increasing their INOCULATION SALES and PROFITS.



Write at once for attractive  
DEALER PRICES  
to

THE McQUEEN BACTERIA CO.  
BALTIMORE, OHIO

## SEED BAG TRIERS

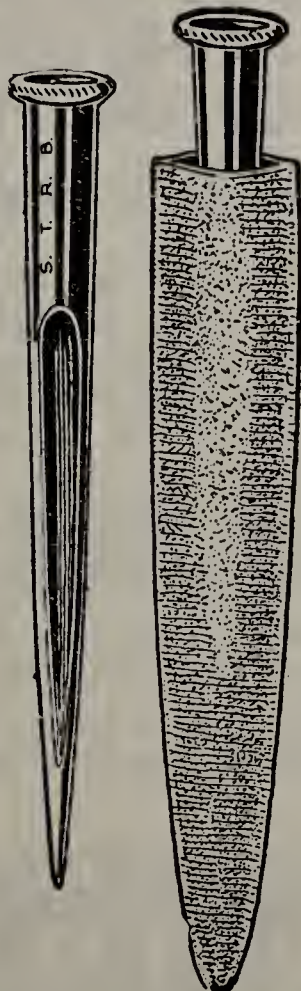
QUICK, SAFE  
CONVENIENT

Seed triers for quick, convenient drawing of samples without opening or tearing bag. Brass with steel point heavily nickel plated, with solid leather protector.

6 inches long,  
Price \$1.00 each,  
\$11.00 per doz.

9 in. long, with  
metal shield,  
Price \$2.00 each.

12 in. long, with  
metal shield,  
Price \$3.00 each



SEED TRADE REPORTING BUREAU  
325 W. Huron St. CHICAGO, ILL.

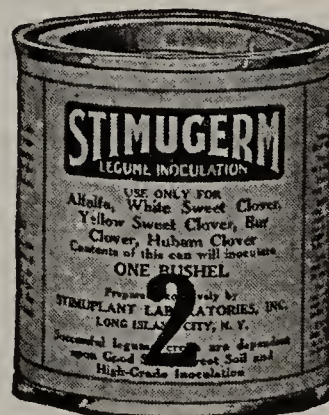
# STIMUGERM

LEGUME INOCULATION

*The Best Inoculation  
for All Legume Seeds*

JELLY or HUMUS form.

FILLS ALL REQUIREMENTS



HUMUS MEDIUM

Gives Best Results



(Jelly Medium)

Guaranteed and Dated

All Orders F. O. B. Dealer's Store

High Bacterial Counts

ATTRACTIVE DISCOUNTS

Stimuplant Laboratories

Incorporated

LONG ISLAND CITY, N. Y.

these manufacturers make every effort possible to aid seedsmen in promoting the sale of legume inoculants.

### Seeds That Need Inoculating

The following seeds require inoculation in order to assure a perfect stand: Red clover, alfalfa, sweet clover, alsike clover, white clover, crimson clover, bur clover, yellow trefoil, lespedeza, garden peas, field peas, lentil, vetches, sweet peas, cowpeas, soybeans, garden beans, field beans, lima beans, velvet beans, peanuts, beggarweed, lupines, sainfoin and other legumes.

### Inoculation "Don'ts"

In order that seed dealers might be in possession of accurate information we are publishing some "don'ts" listed in Idaho Agricultural Experiment Station bulletin, which was distributed to the farmers in that state. They are as follows:—

Don't fail to send in your order at least ten days before you expect to plant.

Don't expect absolutely perfect results; your soil conditions may be at fault.

Don't expose inoculation material or inoculated seeds to direct sunlight.

Don't inoculate and apply nitrogenous fertilizers at the same time.

Don't inoculate the same legume for the same field three years in succession. If you don't secure good nodule response by the second year, have your soil tested.

Don't be discouraged if nodules do not appear as soon as you expected.

Don't pull up the plant and expect to find nodules on the few large roots. They are on the root hairs and would be left in the soil.

Don't expect nodules to form in very dry, or very moist soil. A moisture content sufficient to support best plant growth will cause best nodule formation.

Don't treat seed with a disinfectant and then with inoculation. The disinfectant may kill the bacteria.

Don't expect inoculation to overcome results due to bad seed, improper preparation and cultivation of soil, and decidedly adverse conditions of weather or climate.

Don't expect the inoculating material to control insect and disease attacks further than to increase the resistance of the plant against such attacks.



*Fresh Each Year*  
*Note the High Germ Count*

**BASED ON SUPERIOR QUALITY,  
NITRAGIN IS THE LOWEST PRICED  
INOCULATOR ON THE MARKET**

**9c** . . per Billion Legume Germs as packed  
in 1 bu. sizes for Alfalfa and Clovers  
—8c per Billion for Soy Beans, Cow Peas,  
Lespedeza—and only 6c per Billion for Peas,  
Beans and Vetch . . . even lower rates on  
larger sizes.

**FOR PRICE AND QUALITY—REMEMBER THAT NITRAGIN CAN DO ANY-  
THING CLAIMED BY OTHERS—BUT DO IT BETTER AND CHEAPER.**

Altho not recommended for best results, ANY 1 bu. size NITRAGIN can be used for 2 bu. seed, and give better inoculation than ANY 1 bu. size cheap culture.

Billions of fresh, efficient legume germs packed into every can of NITRAGIN. For your protection, NITRAGIN was the FIRST inoculator printing the Legume Germ Count as packed on every package.

### KNOW WHAT YOU ARE BUYING

Always look on the label for the *Germ Count*, *Expiration Date*, and the *Price*.

*Write for Prices and Discounts*

**THE NITRAGIN COMPANY, Inc.**  
MILWAUKEE, WISCONSIN



## To Sell More Inoculator

say to your customers:

**"SPILL IT over dry seed**

**... MIX**

**IT STICKS ... and hangs on**

**IT IS EASY TO USE . . . . ."**

Alone, this fact makes sales come easier.



### BUILDS PROFITS FOR YOU

Has all other things demanded in legume inoculator: PURITY . . . SUPERIOR GERM CONCENTRATION . . . REASONABLE PERMANENCE (with an expiration date) . . . LIGHT WEIGHT . . . LOW COST . . . CAREFUL PRODUCTION METHOD.

It is a clean, moist powder—30% moisture—free of charcoal or soil.

More farmers will use legume inoculant when it's Easy than when it's troublesome.

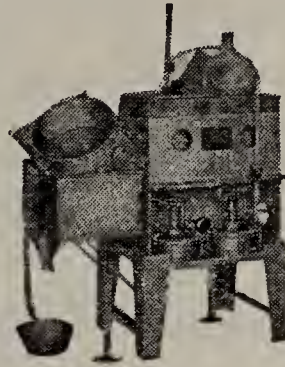
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**FARMING AIDS, INC., Mfgr.**

2364 N. 30th St.

Milwaukee, Wis.

## MOISTURE TESTER



MADE ACCORD-  
ING TO GOV-  
ERNMENT  
SPECIFICA-  
TIONS FOR  
SEED AND  
GRAIN

### SEED TRADE REPORTING BUREAU

325 West Huron Street  
CHICAGO, ILL.

# SEED WORLD ADVERTISING

*brings*

# RESULTS



Place your proposition before the thousands of buyers Seed World reaches and see for yourself the value of this modern up-to-date publication that circulates to practically all the leading firms in the seed industry.

## SPRAYERS AND SPRAY MATERIALS

Insecticides and Fungicides

### ANIMAL DIPS

An-Fo Mfg. Co.  
Oakland, Cal.  
Bourbon Remedy Co.  
Lexington, Ky.  
Carbola Chemical Co.  
Natural Bridge, N. Y.  
Carco Spray Co., Inc.  
Tacoma, Wash.  
**Chipman Chemical Co., Inc.**  
**Bound Brook, N. J.**  
(See Adv. on Page 99)  
Conkey Co., G. E.  
Cleveland, Ohio  
Gateway Chemical Co., Inc.  
Kansas City, Mo.  
Germo Mfg. Co.  
St. Louis, Mo.  
Good, Inc., James  
Philadelphia, Pa.  
**Grasselli Chemical Co., The**  
**Cleveland, Ohio**  
(See Adv. on Second Cover)  
Hess & Clark, Inc., Dr.  
Ashland, Ohio  
Lee Co., Geo. H.  
Omaha, Neb.  
LeGear Medicine Co., Dr. L. D.  
St. Louis, Mo.  
Magic Stock Remedy Co.  
Chattanooga, Tenn.  
Merck & Co., Inc.  
Rahway, N. J.  
**Nicotine Mfg. Co.**  
**St. Louis, Mo.**  
(See Adv. on Page 99)  
Pratt Food Co.  
Philadelphia, Pa.  
Sherwin-Williams Co.  
Cleveland, Ohio  
**Tobacco By-Products & Chem. Corp.**  
**Louisville, Ky.**  
(See Adv. on Front Cover)

### CROW REPELLENTS

Bowker Chemical Co.  
New York, N. Y.  
Cedar Hill Formula Co.  
New Britain, Conn.  
Good, Inc., James  
Philadelphia, Pa.  
**Phillips Company, A. J.**  
**Norwood, N. Y.**  
(See Adv. on Page 143)  
Scott Co., I. W.  
Pittsburgh, Pa.  
Smith & Co., D. B.  
Utica, N. Y.

### DUSTERS

Acmeline, Inc.  
Traverse City, Mich.  
Aphicide Spray Mfg. Co.  
Rocky Ford, Colo.  
Bean Spray Pump Co.  
Lansing, Mich.  
Bowker Chemical Co.  
New York, N. Y.  
Brown Co., E. C.  
Rochester, N. Y.  
**Chipman Chem. Co., Inc.**  
**Bound Brook, N. J.**  
(See Adv. on Page 99)  
Dust Sprayer Mfg. Co.  
Kansas City, Kan.  
Electric Sprayit Co.  
South Bend, Ind.  
Eureka Planter Co., Ltd.  
Woodstock, Ont., Canada  
Feeny Manufacturing Co.  
Muncie, Ind.  
**Ferry-Morse Seed Co.**  
**San Francisco, Calif.**  
(See Adv. on Page 70)  
"Friend" Mfg. Co.  
Gasport, N. Y.

General Metalware Corp.  
Minneapolis, Minn.  
Hardie Mfg. Co.  
Hudson, Mich.  
**Hoeft & Co.**  
**North Chicago, Ill.**  
(See Adv. on Pages 105 and 133)  
Houchin Co., Thos. W.  
Jersey City, N. J.  
Hudson Mfg. Co., H. D.  
Chicago, Ill.  
Lirio, P. E.  
Vineland, N. J.  
Los Angeles Chemical Co.  
Los Angeles, Cal.  
Niagara Sprayer & Chemical Co., Inc.  
Middleport, N. Y.  
Peerless Dust Gun Co.  
Cleveland, Ohio  
Roediger, Paul O.  
Princeton, N. J.  
Root Mfg. Co.  
Cleveland, Ohio  
Sherwin-Williams Co.  
Cleveland, Ohio  
Smith & Co., Inc., D. B.  
Utica, N. Y.  
**Wilson, Inc., Andrew**  
**Springfield, N. J.**  
(See Adv. on Page 121)

### FLY REPELLENTS

Allaire, Woodward & Co.  
Peoria, Ill.  
Allen Mfg. Co., Inc., H. E.  
Carthage, N. Y.  
**Chipman Chem. Co., Inc.**  
**Bound Brook, N. J.**  
(See Adv. on Page 99)  
Electric Sprayit Co.  
South Bend, Ind.  
Eureka Mower Co.  
Utica, N. Y.  
Gateway Chemical Co., Inc.  
Kansas City, Mo.  
General Laboratories, Inc.  
Madison, Wis.  
Germo Mfg. Co.  
St. Louis, Mo.  
Good, Inc., James  
Philadelphia, Pa.  
Hess & Clark, Inc., Dr.  
Ashland, Ohio  
LeGear Medicine Co., Dr. L. D.  
St. Louis, Mo.  
Pratt Food Co.  
Philadelphia, Pa.  
Rex Research, Inc.  
Toledo, Ohio  
Sherwin-Williams Co.  
Cleveland, Ohio  
Smith & Co., Inc., D. B.  
Utica, N. Y.  
Tanglefoot Co., The  
Grand Rapids, Mich.  
Toledo Rex Spray Co.  
Toledo, Ohio  
**Wilson, Inc., Andrew**  
**Springfield, N. J.**  
(See Adv. on Page 121)

### FUMIGANTS—FOR ANIMALS

American Cyanamid Co.  
New York City, N. Y.  
Electric Sprayit Co.  
South Bend, Ind.  
Gateway Chemical Co., Inc.  
Kansas City, Mo.  
Good, Inc., James  
Philadelphia, Pa.  
**Grasselli Chemical Co., The**  
**(Cleveland, Ohio)**  
(See Adv. on Second Cover)  
Interstate Chem. Co.  
Jersey City, N. J.

# Wilson's

## Agricultural Insecticides, Fungicides, Weed Killer and Fertilizers

are certified as to quality and uniformity. On a consistently high record of sales performance they have earned a catalog listing with a large majority of leading seedsmen.

### Offer the Best in Your Catalog

#### WHY BUGS LEAVE HOME



TRADE MARK REG.

#### Wilson's O. K. Plant Spray

A powerful yet safe and efficient contact insecticide for general outside or greenhouse use. Recommended for flowering plants and ornamentals.  $\frac{1}{2}$  pint 40c; quart \$1; gallon \$3; 5 gallons \$12.

#### Wilson's Weed Killer

A clean, odorless, highly concentrated liquid offering a sure and inexpensive method of killing any undesirable plant growth. One gallon makes 40 to 50 gallons treating solution. Quart 75c; gallon \$2; 5 gallons \$8.



#### Wilson's Scale-O

Highly refined miscible oil for dormant use. Controls most scales attacking evergreens as well as on fruit and shade trees. Perfect emulsion — cannot freeze. Quart 75c; gallon \$2; 5 gallons \$9.



"Pyrethrum at its Best"

#### Wilson's Awinc Spray

A non-poisonous, highly concentrated Pyrethrum Spray. Easily controls both sucking and chewing insects of the more resistant type, such as Japanese Beetle, Mexican Bean Beetle, Mealy Bug, Red Spider, Rose Chafer and Slug, Aster and Dahlia Beetle, and many others. Complete, requiring only a dilution with water. Quart \$3; gallon \$10.

Write for descriptive catalog, also packing and discount schedule.

# Andrew Wilson

INC.

Springfield,

New Jersey

## SPRAYERS AND SPRAY MATERIALS—Continued

## Fumigants for Animals—Continued

LeGear Medicine Co., Dr. L. D.  
St. Louis, Mo.  
Merck & Co., Inc.  
Rahway, N. J.  
Nicotine Mfg. Co.  
St. Louis, Mo.  
(See Adv. on Page 99)  
Perth Amboy Chemical Works  
New York City, N. Y.  
Sherwin-Williams Co.  
Cleveland, Ohio

## FUMIGANTS—FOR PLANTS

Douglas Chemical & Supply Co.  
Kansas City, Mo.  
(See Adv. on Page 127)  
Electric Sprayit Co.  
South Bend, Ind.  
Innis, Spieden & Co. (Seed)  
New York, N. Y.  
Nicotine Mfg. Co.  
St. Louis, Mo.  
(See Adv. on Page 99)  
Tobacco By-Products & Chemical Corp.  
Louisville, Ky.  
(See Adv. on Front Cover)  
Uniform Products Co.  
New York, N. Y.  
Wilson, Inc., Andrew  
Springfield, N. J.  
(See Adv. on Page 121)

## FUNGICIDES

Acme White Lead & Color Works  
Detroit, Mich.  
American Agricultural Chemical Co.  
New York, N. Y.  
American Cyanamid Co.  
New York City, N. Y.  
Ansbacher Siegle Corp.  
New York, N. Y.  
Ansul Chemical Co.  
Marinette, Wis.  
(See Adv. on Page 123)  
Aphine Mfg. Co.  
Madison, N. J.  
Bayer-Semesan Co., Inc. (Disinfectants)  
Wilmington, Del.  
California Spray-Chem. Corp.  
Berkeley, Calif.  
Carbola Chemical Co.  
Natural Bridge, N. Y.  
Chipman Chem. Co., Inc.  
Bound Brook, N. J.  
(See Adv. on Page 99)  
Electric Sprayit Co.  
South Bend, Ind.  
"Friend" Mfg. Co.  
Gasport, N. Y.  
General Chemical Co.  
New York, N. Y.  
Good, Inc., James  
Philadelphia, Pa.  
Grasselli Chemical Co., The  
Cleveland, Ohio  
(See Adv. on Second Cover)  
Hammond's Paint & Chemical Works  
Beacon, N. Y.  
(See Adv. on Page 123)  
Interstate Chemical Co.  
Jersey City, N. J.  
Kiger Chemical Co. (Disinfectants)  
Bowling Green, Ohio  
Los Angeles Chemical Co.  
Los Angeles, Cal.  
McCarty Seed Co., J. A.  
Evansville, Ind.  
Pratt Co., B. G.  
New York City, N. Y.  
Rex Research, Inc.  
Toledo, Ohio  
Rose Mfg. Co.  
Philadelphia, Pa.  
Sherwin-Williams Co.  
Cleveland, Ohio  
Stauffer Chemical Co.  
Chicago, Ill.

Stumpp & Walter Co.  
New York City, N. Y.  
Wilson, Inc., Andrew  
Springfield, N. J.  
(See Adv. on Page 121)

## INSECTICIDES—ANIMAL

Antrol Laboratories  
Los Angeles, Calif.  
Bourbon Remedy Co.  
Lexington, Ky.  
Burrell-Dugger  
Indianapolis, Ind.  
Carbola Chemical Co.  
Natural Bridge, N. Y.  
Carbolineum Wood Preserving Co.  
Milwaukee, Wis.  
Chipman Chem. Co., Inc.  
Bound Brook, N. J.  
(See Adv. on Page 99)  
Conkey Co., G. E.  
Cleveland, Ohio  
Electric Sprayit Co.  
South Bend, Ind.  
General Laboratories, Inc.  
Madison, Wis.  
Germo Mfg. Co.  
St. Louis, Mo.  
Hess & Clark, Inc., Dr.  
Ashland, Ohio  
Klein-Lambert Co.  
Blue Island, Ill.  
(See Adv. on Page 135)  
LeGear Medicine Co., Dr. L. D.  
St. Louis, Mo.  
Magic Stock Remedy Co.  
Chattanooga, Tenn.  
Merck & Co., Inc.  
Rahway, N. J.  
Pratt Food Co.  
Philadelphia, Pa.  
Rex Research, Inc.  
Toledo, Ohio  
Shepard Laboratories  
(Shep's Household Spray)  
Council Bluffs, Iowa  
(See Adv. on Page 101)  
Smith & Co., D. B.  
Utica, N. Y.  
Tobacco By-Products & Chem. Corp., Inc.  
Louisville, Ky.  
(Black Leaf 40)  
(See Adv. on Front Cover)  
Wilson, Inc., Andrew  
Springfield, N. J.  
(See Adv. on Page 121)

## INSECTICIDES—PLANT

Acme White Lead & Color Works  
Detroit, Mich.  
Aggeler & Musser Seed Co.  
Los Angeles, Calif.  
American Agricultural Chemical Co.  
New York, N. Y.  
American Bulb Co.  
Chicago, Ill.  
(See Adv. on Page 38)  
American Color & Chemical Co.  
Boston, Mass.  
American Cyanamid Co.  
New York City, N. Y.  
An-Fo Mfg. Co.  
Oakland, Cal.  
Ansbacher Siegle Corp.  
New York City, N. Y.  
Ansul Chemical Co.  
Marinette, Wis.  
(See Adv. on Page 123)  
Aphine Mfg. Co.  
Madison, N. J.  
Atlanta Chemical Co.  
Atlanta, Ga.  
Bon Arbor Chemical Co.  
Paterson, N. J.  
Bourbon Remedy Co.  
Lexington, Ky.  
Calif. Spray-Chemical Corp.  
Berkeley, Calif.  
Carco Spray Co., Inc.  
Tacoma, Wash.

**HAMMOND'S**

# For Bigger 1933 Profits

*The Grand Old Hammond  
Line Now Offers You The  
Largest Margin Of Profit*

**We back our Products with:**

**HAMMOND'S**



100% Jobber and  
Dealer Protection;  
Increased Consumer  
Advertising; Inten-  
sive Sales Coopera-  
tion.

**STEADY SELLING LEADERS:**

## "SLUG SHOT"

The Safe and Easy-To-Use Dust—Nothing  
Else to Buy.

Used more than 50 years by farmers, florists  
and home gardeners for the control of Chew-  
ing Insects, AND AS A FUNGICIDE. A  
SURE SELLING ITEM.

## "GRAPE and ROSE DUST"

The Most Easily Used Fungicide.

Prevents and controls Powdery Mildew and  
Black Spot on Roses. The safe and effective  
Fungicide, for use on all flowering and vege-  
table plants.

## "COPPER SOLUTION"

Concentrated liquid fungicide, the most  
effective available for combating Black Spot  
and Mildew on Roses, Grape Rot, Grape Mil-  
dew, Pear and Quince Blight, Tomato Blight,  
Carnation Rust and Red Spider.

## "ANT GAS"

Kills ants quickly. No fuss, no mess, and no  
dangerous, poisonous traps necessary. A tea-  
spoonful of Ant Gas poured on any ant hill  
kills *all* ants immediately. Catalog this sure-  
selling, long-profit item for 1933.

## "THRIP JUICE"

This concentrated spray goes further, costs  
less, has higher percentage of kill, and lasts  
longer than ordinary nicotine combinations.  
Kills Aphids, Thrips, red Spiders and other  
sucking insects.

## "PAINTS & PUTTIES"

For greenhouse use, including "Old Eng-  
lish" Liquid Putty, the original plastic. Ask  
for Price List on Paints and Putties. Ham-  
mond Paints and Putties are now priced for  
resale profits to you.

## "THE NEW PEST KIT"

A combination display  
package containing a can  
of slug shot for Chewing  
Insects, Thrip Juice as a  
contact insecticide, Grape  
and Rose Dust to control  
Fungus, a handy spray  
gun. Value \$1.25 to sell for  
95c. This is a real profit  
maker for you during 1933.

**Write for details of our 1933 program**

**HAMMOND PAINT & CHEMICAL CO.**

Estb. 1875

**Beacon, N. Y.**

**HAMMOND'S**

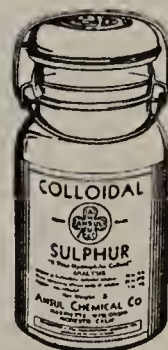


# Ansul COLLOIDAL SULPHUR

*The Most Effective Sulphur Fungicide  
Known for Fruits, Vegetables, Flowers,  
Ornamental Shrubs and Trees*



Ansul Colloidal Sulphur is  
effective against all the usual  
fungus and bacterial diseases  
of Fruits, Vegetables, Flow-  
ers, and Ornamental Shrubs  
and Trees, which  
can be controlled  
by spraying. It  
may be safely  
used throughout  
the entire grow-  
ing season.



Ansul Colloid-  
al Sulphur con-  
trols red spider  
and scale insects.

# Ansul FORMALDEHYDE DUST

A seed and soil treating compound,  
which controls seed-borne diseases, root  
rots and damping off of seedlings and  
cuttings. It saves growers the necessity  
of continually changing the sand in  
propagating benches.

The demand for these two money-  
saving and labor-saving materials for  
growers is steadily increasing all over the  
country. Alert dealers will profit by  
handling these two important, money-  
making items.

Forward your name and  
address at once and permit  
us to send you retail and  
wholesale prices, together  
with the experience of impor-  
tant users all over the country.



**Ansul**

**CHEMICAL COMPANY**

Marinette, Wisconsin

Modesto, California

## SPRAYERS AND SPRAY MATERIALS—Continued

## Insecticides—Plant—Continued

**Chipman Chemical Co., Inc.**

**Bound Brook, N. J.**

(See Adv. on Page 99)

**Cook & Co., Geo. C.**

New York City, N. Y.

**Cooper & Nephews, Wm.**

Chicago, Ill.

**Cooper, MacDougal, Robertson, Ltd.**

Berkhamsted, England

**Dethol Mfg. Co.**

Baltimore, Md.

**Douglas Chemical & Supply Co.**

**Kansas City, Mo.**

(See Adv. on Page 127)

**Dow Chemical Co.**

Midland, Mich.

**Electric Sprayit Co.**

South Bend, Ind.

**"Friend" Mfg. Co.**

Gasport, N. Y.

**Garden Supplies (1929), Ltd.**

Liverpool, England

**Gateway Chemical Co., Inc.**

Kansas City, Mo.

**General Chemical Co.**

New York City, N. Y.

**Golden State Milk Products Co.**

San Francisco, Calif.

**Golden States Sales Corp.**

New York, N. Y.

**Good, Inc., James**

Philadelphia, Pa.

**Goulard & Olena, Inc.**

New York, N. Y.

**Grasselli Chemical Co., The**

**Cleveland, Ohio**

(See Adv. on Second Cover)

**Griffith & Turner Co.**

Baltimore, Md.

**Half Moon Mfg. & Trading Co.**

New York, N. Y.

**Hammond's Paint & Chemical Works**

**Beacon, N. Y.**

(See Adv. on Page 123)

**Hempstead, Earl L.**

Bloomington, Ill.

**Home Products, Inc.**

Rahway, N. J.

**Horn Co., A. C.**

Long Island City, N. Y.

**Interstate Chemical Co.**

Jersey City, N. J.

**Kalo Company**

Quincy, Ill.

**Kay-Fries Chemicals, Inc.**

New York, N. Y.

**Le Gear Medicine Co., Dr. L. D.**

St. Louis, Mo.

**Lemon Oil Co.**

Baltimore, Md.

**Los Angeles Chemical Co.**

Los Angeles, Cal.

**Lucas Kil-Tone Co.**

Vineland, N. J.

**McCarty Seed Co., J. A.**

Evansville, Ind.

**McCormick & Co., Inc.**

Baltimore, Md.

**McLaughlin, Gormley King Co.**

Minneapolis, Minn.

**Mechling Bros. Chemical Co.**

**Camden, N. J.**

(See Adv. on Page 125)

**National Plant Food Co.**

Eau Claire, Wis.

**Niagara Sprayer & Chemical Co., Inc.**

Middleport, N. Y.

**Nicotine Mfg. Co.**

**St. Louis, Mo.**

(See Adv. on Page 99)

**Perth Amboy Chemical Works**

New York City, N. Y.

**Powell & Co., Inc., John**

New York City, N. Y.

**Pratt Co., B. G.**

New York City, N. Y.

**Read, Inc., Morris B.**

Belleville, N. J.

**Rex Research, Inc.**

Toledo, Ohio

**Rice, J. H.**

Ashtabula, Ohio

**Rose Mfg. Co.**

Philadelphia, Pa.

**Shepard Laboratories**

**Council Bluffs, Iowa**

**(Shep's Plant Spray)**

(See Adv. on Page 101)

**Sherwin-Williams Co.**

Cleveland, Ohio

**Smith & Co., Inc., D. B.**

Utica, N. Y.

**Sporicide Chemical Co.**

Atlanta, N. Y.

**Stauffer Chemical Co.**

Chicago, Ill.

**Stoothoff & Co., H. A.**

York, Pa.

**Tobacco By-Products & Chemical Corp., Inc.**

**(Black Leaf 40)**

**Louisville, Ky.**

(See Adv. on Front Cover)

**Uniform Products Co.**

New York, N. Y.

**Walrath & Sons, H. J.**

Conneaut, Ohio

**Wilson, Inc., Andrew**

**Springfield, N. J.**

(See Adv. on Page 121)

## MOTH KILLERS

**Allaire, Woodward & Co.**

Peoria, Ill.

**Douglas Chemical & Supply Co.**

**Kansas City, Mo.**

(See Adv. on Page 127)

**General Laboratories, Inc.**

Madison, Wis.

**Good, Inc., James**

Philadelphia, Pa.

**Home Products, Inc.**

Rahway, N. J.

**Rex Research, Inc.**

Toledo, Ohio

**Taylor Chemical Co.**

New York City, N. Y.

## PEST EXTERMINATORS

**(Rats, Etc.)**

**American Cyanamid Co.**

New York City, N. Y.

**Antrol Laboratories, Inc.**

Los Angeles, Calif.

**Bon Arbor Chemical Co. (Ant)**

Paterson, N. J.

**Carbola Chemical Co.**

Natural Bridge, N. Y.

**Carco Spray Co., Inc.**

Tacoma, Wash.

**Chipman Chem. Co., Inc.**

**Bound Brook, N. J.**

(See Adv. on Page 99)

**Douglas Chemical & Supply Co.**

**Kansas City, Mo.**

(See Adv. on Page 127)

**Electric Sprayit Co.**

South Bend, Ind.

**General Laboratories, Inc.**

Madison, Wis.

**Germo Mfg. Co.**

St. Louis, Mo.

**Felix Girard Co., Inc. (Rat)**

Minneapolis, Minn.

**Good, Inc., Jas.**

Philadelphia, Pa.

**Green, E. A. (Mole)**

Beverly, N. J.

**Grasselli Chemical Co., The**

**Cleveland, Ohio**

(See Adv. on Second Cover)

**Jones Products Co. (Ant)**

**Chicago, Ill.**

(See Adv. on Page 125)

**K-R-O Co., The**

Springfield, Ohio

**LeGear Medicine Co. Dr. L. D.**

St. Louis, Mo.

# MECHLING'S PYROTE

Reg. U. S. Pat. Off.

NON-POISONOUS  
Double Acting

## INSECT SPRAY

For

FLOWERS, PLANTS  
VEGETABLES, FRUITS

KILLS

Chewing Insects When They FEED  
Chewing and Sucking Insects when  
it HITS them

Non-Injurious to Vegetation  
Harmless to Humans and Animals

*Pyrote is especially recommended  
to florists*

MECHLING BROS. CHEMICAL CO.  
CAMDEN, N. J.

A  
N  
T  
S



A  
N  
T  
S

## MASTER ANT KILLER

IS

Guaranteed to RID home and  
lawn of ANTS in 24 hours.

SOLD ON A MONEY BACK  
GUARANTEE

Prepared in liquid form; no spraying.  
Comes in bottles. Retail 10c, 25c, and  
50c; also quarts, half gallons, and gal-  
lons. Write for prices and discounts.

JONES PRODUCTS CO.  
2241 N. Cicero Ave. CHICAGO, ILL.

For Your Protection and Ours

# USE THE STICKER!

(See Page Facing Back Cover)

## SPRAYERS AND SPRAY MATERIALS—Concluded

**Pest Exterminators—Continued**

McAleer Co., E. J. (Beetle Traps)  
Philadelphia, Pa.  
McCloud & Co., W. B.  
Chicago, Ill.  
Merchants Drug Co.  
Easton, Md.  
Merck & Co., Inc.  
Rahway, N. J.  
Peerless Auto Trap Co.  
Chicago, Ill.  
Reardon Laboratories, Inc., W. G.  
Port Chester, N. Y.  
Rex Research, Inc.  
Toledo, Ohio  
Rick Drug Co., H. L. (Rat)  
Galion, Ohio  
Senoret Chemical Co. (Ant)  
St. Louis, Mo.  
**Stimulant Laboratories, Inc.**  
Long Island City, N. Y.  
(See Adv. on Page 117)  
Tanglefoot Co., The  
Grand Rapids, Mich.  
V. & M. Products Co.  
Galesburg, Mich.  
Virus Limited, Inc.  
New York City, N. Y.  
**Wilson, Inc., Andrew**  
Springfield, N. J.  
(See Adv. on Page 121)  
Woods Chemical Co., Inc., C. G. (Rat)  
Glendale, Calif.

**SEED DISINFECTANTS**

**Ansul Chemical Co.**  
Marinette, Wis.  
(See Adv. on Page 123)  
Bayer-Semesan Co., Inc.  
Wilmington, Del.  
Bowker Chemical Co.  
New York, N. Y.  
Electric Sprayit Co.  
South Bend, Ind.  
Kiger Chemical Co.  
Bowling Green, Ohio  
Merck & Co., Inc.  
Rahway, N. J.

**SPRAYERS**

Acmeline, Inc.  
Traverse City, Mich.  
Aggeler & Musser Seed Co.  
Los Angeles, Calif.  
Alliance Mfg. Co., The  
Alliance, Ohio  
An-Fo Mfg. Co.  
Oakland, Cal.  
Armstrong Electric & Mfg. Corp.  
Huntington, W. Va.  
Barnes Mfg. Co.  
Mansfield, Ohio  
Bean Spray Pump Co.  
Lansing, Mich.  
Brower Mfg. Co.  
Quincy, Ill.  
Brown Co., E. C.  
Rochester, N. Y.  
Campbell-Hausfeld Co., The  
Harrison, Ohio  
**Chipman Chem. Co., Inc.**  
Bound Brook, N. J.  
(See Adv. on Page 99)  
Crown Mfg. Co.  
Phelps, N. Y.  
Deming Co.  
Salem, Ohio  
Electric Sprayit Co.  
South Bend, Ind.  
**Ellis-Keystone Agricultural Works**  
Pottstown, Pa.  
(See Adv. on Page 113)  
Eureka Mower Co.  
Utica, N. Y.

Feeny Mfg. Co.  
Muncie, Ind.  
Field Force Pump Co.  
Elmira, N. Y.  
"Friend" Mfg. Co.  
Gasport, N. Y.  
General Metalware Corp.  
Minneapolis, Minn.  
Goulds Mfg. Co.  
Seneca Falls, N. Y.  
Hamilton, W. L.  
Bangor, Mich.  
Hardie Mfg. Co.  
Hudson, Mich.  
Hayes Pump & Planter Co.  
Galva, Ill.  
**Hoeft & Co., Inc.**  
North Chicago, Ill.  
(See Adv. on Pages 105 and 133)  
Hudson Mfg. Co., H. D.  
Chicago, Ill.  
Humphreys Mfg. Co.  
Mansfield, Ohio  
**Illinois Supply Co.**  
Aurora, Ill.  
(See Adv. on Page 133)  
Lirio, P. E.  
Vineland, N. J.  
Los Angeles Chemical Co.  
Los Angeles, Cal.  
Lowell Sprayer Co.  
Lowell, Mich.  
Monarch Engineering Co.  
Dayton, Ohio  
Morrill & Morley Mfg. Co.  
Benton Harbor, Mich.  
Myers & Bro. Co., The F. E.  
Ashland, Ohio  
Niagara Sprayer & Chemical Co., Inc.  
Middleport, N. Y.  
Opitz, Inc., J.  
New York, N. Y.  
Peerless Dust Gun Co.  
Cleveland, Ohio  
Pugsley & Morrison  
Yuba City, Calif.  
Roediger, Paul O.  
Princeton, N. J.  
Smith & Co., Inc., D. B.  
Utica, N. Y.  
**Wilson, Inc., Andrew**  
Springfield, N. J.  
(See Adv. on Page 121)

**WEED DESTROYERS**

Atlas Preservative Co.  
New York City, N. Y.  
Bentley, Ltd., Jos.  
Hull, England  
**Chipman Chem. Co., Inc.**  
Bound Brook, N. J.  
(See Adv. on Page 99)  
Garden Supplies (1929), Ltd.  
Liverpool, England  
Good, Inc., James  
Philadelphia, Pa.  
**Grasselli Chemical Co., The**  
Cleveland, Ohio  
(See Adv. on Second Cover)  
**Hammond's Paint & Chemical Works**  
Beacon, N. Y.  
(See Adv. on Page 123)  
Interstate Chem. Co.  
Jersey City, N. J.  
McClain Bros.  
Canton, Ohio  
Reade Mfg. Co.  
Jersey City, N. J.  
Weed Control Co.  
Berkeley, Calif.  
**Wilson, Inc., Andrew**  
Springfield, N. J.  
(See Adv. on Page 121)

# Kill the Bugs Moth, Weevil and Worms

With

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NEW LOW PRICES

100% Active Ingredients

AMERICAN FIELD SEED CO.	Chicago, Ill.
J. C. LEONARD SEED CO.	Chicago, Ill.
D. LANDRETH SEED CO.	Bristol, Pa.
HENRY A. DREER	Philadelphia, Pa.
HENRY F. MICHELL SEED CO.	Philadelphia, Pa.
I. N. SIMON & SON	Philadelphia, Pa.
PHILADELPHIA SEED CO	Philadelphia, Pa.
J. D. LONG SEED CO.	Boulder, Colo.

The above representative Seed Firms and  
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for years

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## PETS AND PET SUPPLIES

### BIRDS

Bishop, Inc., Henry  
Baltimore, Md.  
J. C. Edwards  
Los Angeles, Calif.  
H. J. Fletcher Co.  
Philadelphia, Pa.  
Flower's Tropical Bird Farms  
Van Nuys, Cal.  
Haller's Pet Shop  
St. Louis, Mo.  
Mussog's Bird Store  
Philadelphia, Pa.  
National Pet Shops  
St. Louis, Mo.  
Nollen & Son, H. A.  
Dubois, Pa.  
Odenwald Bird Co.  
New York, N. Y.  
Putnam's—Gold and Tropical Fish  
Buffalo, N. Y.  
Robison, Ansel W.  
San Francisco, Cal.  
Schlagheck, Inc., Jos.  
Toledo, Ohio  
Southern's Bird Farm  
Clifton Hill, Mo.  
"Steins" Canary Plant  
Philadelphia, Pa.  
Vahle, E. C.  
Chicago, Ill.

### BIRD BATHS

Brush Pottery Co.  
Zanesville, Ohio  
Louisville Pottery Co., Inc.  
Louisville, Ky.  
Novelty Iron Works  
Sterling, Ill.  
Silvertone Co.  
New York, N. Y.  
Smith Wire & Iron Works, F. P.  
Chicago, Ill.  
United Mfg. Co., Inc.  
Philadelphia, Pa.  
Western Stoneware Co.  
Monmouth, Ill.  
Zane Pottery Co.  
South Zanesville, Ohio

### BIRD CAGES

American Import Co., The  
San Francisco, Calif.  
Bishop, Inc., Henry  
Baltimore, Md.  
Friedlaener, Paul N.  
New York, N. Y.  
Hendryx Co., Andrew C.  
New Haven, Conn.  
**Illinois Supply Co.**  
**Aurora, Ill.**  
(See Adv. on Page 133)  
Mussog's Bird Store  
Philadelphia, Pa.  
National Pet Shops  
St. Louis, Mo.  
Nollen & Son, H. A.  
Dubois, Pa.  
Putnam's—Gold and Tropical Fish  
Buffalo, N. Y.  
Raedlein Basket Co.  
Chicago, Ill.  
Schlagheck, Inc., Jos.  
Toledo, Ohio  
Silvertone Co.  
New York, N. Y.  
"Steins" Canary Plant  
Philadelphia, Pa.  
Vahle, E. C.  
Chicago, Ill.

### BIRD CAGE STANDS—METAL

Bishop, Inc., Henry  
Baltimore, Md.  
Hendryx Co., Andrew B.  
New Haven, Conn.  
Mussog's Bird Store  
Philadelphia, Pa.

Putnam's—Gold and Tropical Fish  
Buffalo, N. Y.  
Schoemann & Mayer, Inc.  
New York City, N. Y.  
Silvertone Co.  
New York, N. Y.  
Vahle, E. C.  
Chicago, Ill.

### BIRD HOUSES

Arcade Mfg. Co.  
Freeport, Ill.  
Bishop, Inc., Henry  
Baltimore, Md.  
Bishop, Welles L.  
Meriden, Conn.  
Dodson, Inc., Jos. H.  
Kankakee, Ill.  
Express Body Corp.  
Crystal Lake, Ill.  
Homecraft Specialty Mfg. Co.  
Mattoon, Ill.  
National Pet Shops  
St. Louis, Mo.  
Putnam's—Gold and Tropical Fish  
Buffalo, N. Y.  
Rieber Bird Homes  
West Webster, N. Y.  
Schaad & Son, E. J.  
Merrill, Wis.  
**Straw Products Co.**  
**Philadelphia, Pa.**  
(See Adv. on Pages 129 and 145)  
Western Stoneware Co.  
Monmouth, Ill.  
Woodcraft Co., The  
Dalton, N. Y.

**Yoho & Hooker**  
**Youngstown, Ohio**

(See Adv. on Page 111)

### BIRD SEED AND SUPPLIES

American Bird Products Co.  
Chicago, Ill.  
**Battle Creek Dog Food Co.**  
**Battle Creek, Mich.**  
(See Adv. on Page 131)  
Bishop, Inc., Henry  
Baltimore, Md.  
Dickinson Co., Albert  
Chicago, Ill.  
**Duryea Seed Co., Inc.**  
**New York, N. Y.**  
(See Adv. on Page 32)  
Edwards, J. C. (Bird Food)  
Los Angeles, Calif.  
Exner Sand & Gravel Co.  
New York, N. Y.  
Franks Bird Store, Inc. (Song Restorer)  
New York, N. Y.  
Friedlaener, Paul N. (Song Restorer)  
New York, N. Y.  
Haller's Pet Shop  
St. Louis, Mo.  
Heger Products Co.  
St. Paul, Minn.  
Hinton & Co., Inc.  
New York, N. Y.  
Horton Co., Inc., F. T.  
Hoboken, N. J.  
Johnson, Inc., J. Oliver  
Chicago, Ill.  
Justrite Co., The  
Milwaukee, Wis.  
Magnesia Products Co.  
Milwaukee, Wis.  
**Mangelsdorf & Bro., Ed. F.**  
**St. Louis, Mo.**  
(See Adv. on Page 15)  
Mussog's Bird Store  
Philadelphia, Pa.  
National Pet Shops  
St. Louis, Mo.  
Nature Friend, The  
New York, N. Y.  
Nollen & Son, H. A.  
Dubois, Pa.  
Peerless Mfg. Co.  
Dearborn, Mich.



## RECLAIM PROFITS *Everywhere*

Have your sales on ordinary bird houses "slowed up?"

NOW is the time to offer a distinctive new line to your customers.

They will buy STRAW BIRD HOUSES because they are artistic and highly ornamental, and at the same time inexpensive and practical.

Good discounts, and plenty of sales insure you good profit.

Free catalog cuts are available. Write for full information.

**THE STRAW PRODUCTS  
C O M P A N Y**

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PHILADELPHIA, PENNSYLVANIA

## SEED BAG TRIERS

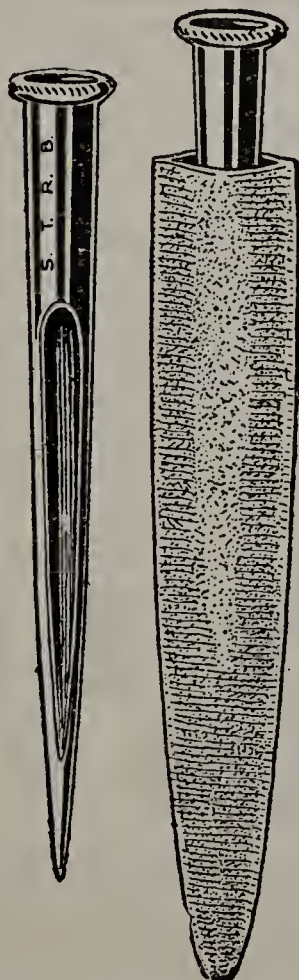
**QUICK, SAFE  
CONVENIENT**

Seed triers for quick, convenient drawing of samples without opening or tearing bag. Brass with steel point heavily nickel plated, with solid leather protector.

6 inches long,  
Price \$1.00 each,  
\$11.00 per doz.

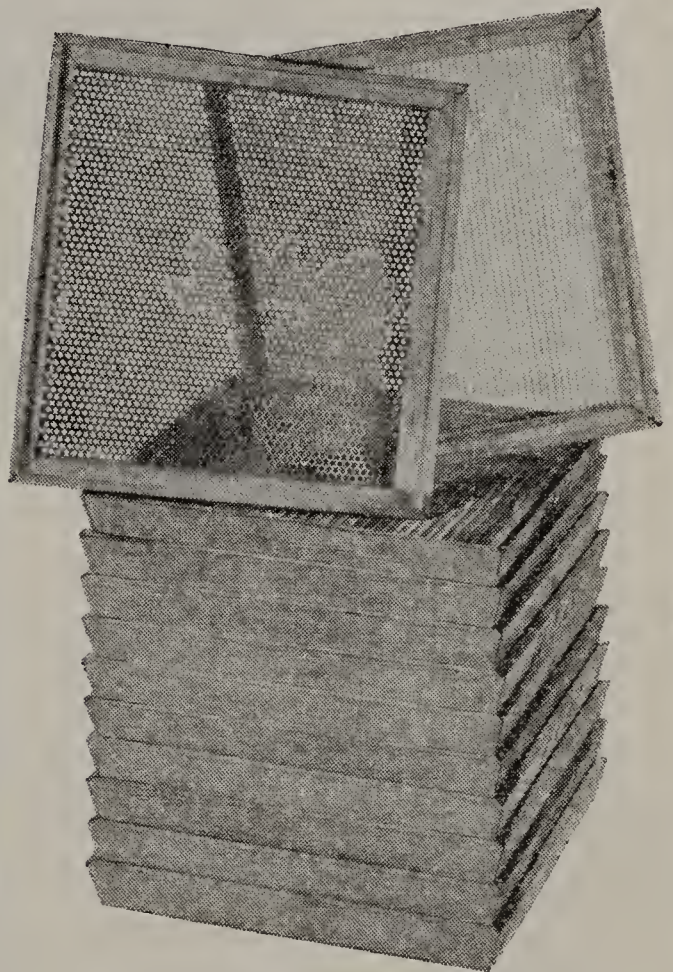
9 in. long, with  
metal shield,  
Price \$2.00 each.

12 in. long, with  
metal shield,  
Price \$3.00 each.



**SEED TRADE REPORTING BUREAU**  
325 W. Huron St. CHICAGO, ILL.

## Seed Sieves



For determining dockage the following can be used to advantage. Sieves are 8" x 8".

**TIMOTHY**  
1/25 zinc top  
6x32 wire mesh  
bottom.

**ALSIKE**  
1/20 zinc top.  
1/18 zinc top.  
26x26 wire mesh  
bottom.  
6x32 wire mesh  
bottom.

**RED CLOVER**  
1/15 zinc top.  
6x24 wire mesh.  
4x24 wire mesh.

**ALFALFA**  
1/15 zinc top.  
1/19 zinc top.  
4x26 wire mesh.

**SWEET CLOVER**  
7/64 zinc top for rough  
dockage.

1/15 zinc top for re-  
moving unhulled  
seed.

1/16 zinc top to re-  
move unhulled seed.  
4x24 wire mesh bottom  
for common sweet.  
4x26 wire mesh bottom  
for dwarf sweet.

## *Don't Buy* DIRT!

It is not necessary to buy weed seeds and inert matter when you have a set of our seed dockage sieves. You can determine for yourself the percentage of pure seed.

We can furnish an accurate set of sieves for each variety of field seed.

*Write for prices*

**SEED TRADE  
REPORTING BUREAU**

325 W. Huron St.

Chicago

**PETS AND PET SUPPLIES—Concluded****Bird Seed and Supplies—Continued**

Pet Foods Co. of America  
New York, N. Y.  
Philadelphia Bird Food Co.  
Philadelphia, Pa.  
**Philadelphia Seed Co.**  
**Philadelphia, Pa.**  
(See Adv. on Page 20)  
Putnam's—Gold and Tropical Fish  
Buffalo, N. Y.  
**Radwaner Seed Co., I. L.—(Bird Seed)**  
**New York City, N. Y.**  
(See Adv. on Pages 63 and 81)  
Scarlett & Co., Wm. G.—Bird Food  
Baltimore, Md.  
Schlagheck, Inc., Jos.  
Toledo, Ohio  
Silvertone Co. (Bird Food)  
New York, N. Y.  
Southern's Bird Farm  
Clifton Hill, Mo.  
Spratt's Patent, Ltd.  
Newark, N. J.  
Von Damm, F. H.—Bird Food  
Brooklyn, N. Y.

**DOG FOODS AND SUPPLIES**

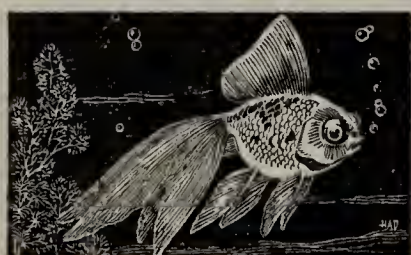
**Battle Creek Dog Food Co.**  
**Battle Creek, Mich.**  
(See Adv. on Page 131)  
Beck Bros. (Dog Collars, etc.)  
Herrick, Ill.  
Brown Co., Geo. C.  
Memphis, Tenn.  
Champion Animal Food Co.  
Minneapolis, Minn.  
Chappell Bros., Inc.  
Rockford, Ill.  
Glover Co., Inc., H. Clay  
New York, N. Y.  
Good, Inc., James  
Philadelphia, Pa.  
Heger Products Co.  
St. Paul, Minn.  
**Imperial Biscuit Co.**  
**Sackets Harbor, N. Y.**  
(See Adv. on Page 131)  
Justrite Co.  
Milwaukee, Wis.  
Le Gear Medicine Co., Dr. L. D. (Remedies)  
St. Louis, Mo.  
National Pet Shops  
St. Louis, Mo.  
Nowak Milling Co.  
Hammond, Ind.  
Olding Food Corp., Dr.  
New York, N. Y.  
Old Trusty Dog Food Co.  
Needham Heights, Mass.  
Peerless Dog Food Co.  
Battle Creek, Mich.  
**Perfection Foods Co.**  
**Battle Creek, Mich.**  
(See Adv. on Page 131)  
**Philadelphia Seed Co.**  
**Philadelphia, Pa.**  
(See Adv. on Page 20)  
Potter-Wrightington, Inc.  
Boston, Mass.

Putnam's—Gold and Tropical Fish  
Buffalo, N. Y.  
Richmond Abattoir (Dog Ration)  
Richmond, Va.  
Rose & Co., G. P.  
Nashville, Tenn.  
**St. Louis Seed Co.**  
**St. Louis, Mo.**  
(See Adv. on Page 59)

Scott Co., I. W.  
Pittsburgh, Pa.  
Simpson Products Co.  
Terre Haute, Ind.  
Spratt's Patent, Ltd.  
Newark, N. J.  
Wapler Co., Nicholas  
New York, N. Y.

**GOLD FISH AND SUPPLIES**

American Bird Products Co.  
Chicago, Ill.  
Ashbourne Goldfish & Supply Co.  
Burlington, Iowa  
**Auburndale Goldfish Co.**  
**Chicago, Ill.**  
(See Adv. on Page 131)  
**Battle Creek Dog Food Co.**  
**Battle Creek, Mich.**  
(See Adv. on Page 131)  
Bruce Goldfish Fisheries  
Thornburg, Iowa  
Crescent Fish Farm  
New Orleans, La.  
Grassyfork Fisheries, Inc. (Shubunkins)  
Martinsville, Ind.  
Gray, Roger P. (Tropical Fish)  
Ojus, Fla.  
Japanese Goldfish Hatchery Co.  
North Branch, N. J.  
Justrite Co., The  
Milwaukee, Wis.  
Lakeview Ponds, The  
Mt. Airy, Cincinnati, Ohio  
Loveland Goldfish Farms  
Loveland, Ohio  
Mt. Parnell Fisheries  
Mercersburg, Pa.  
Mussog's Bird Store  
Philadelphia, Pa.  
National Pet Shops  
St. Louis, Mo.  
**Pacific Goldfish Farm**  
**Westminster, Cal.**  
(See Adv. on Page 130)  
Percy Goldfish Co.  
Martinsville, Ind.  
Putnam's—Gold and Tropical Fish  
Buffalo, N. Y.  
Schlagheck, Inc., Joseph  
Toledo, Ohio  
Spratt's Patent, Ltd. (Supplies)  
Newark, N. J.  
Spring Lake Fishery  
Waldron, Ind.  
Tamms Silica Co. (Pebbles)  
Chicago, Ill.  
Wapler Co., Nicholas  
New York, N. Y.  
Wells Glass Co. (Colored Glass Chips)  
Kokomo, Ind.

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SCAVENGERS and ACCESSORIES

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*Marketed for More Than 20 Years*

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for  
dogs,  
all  
breeds  
and  
puppies,  
all  
ages



## Perfection Meat-Cereal

Perfection Whole Biscuit (with Meat)

Perfection Kibbled Biscuit (with Meat)

Perfection Whole-Wheat Biscuit  
(With Meat).

Granulated Biscuit Puppy Food  
(With Meat).

Perfection Canned Meat Food

All Biscuits are Quartered

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**50%  
TO  
100%  
PROFIT**

**Sales  
Guaranteed**

Seed dealers everywhere are depending on these famous "Battle Creek Health Foods for Dogs" to hold up sales during the slow season. This complete line moves 365 days a year without seasonal fluctuations. Miller's Dog Foods are nationally advertised and sold throughout the United States.

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Samples and complete information sent without obligation. A letter brings you details of our unique selling plan.

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BATTLE CREEK » » » MICHIGAN

# Imperial Dog Food

is proving a quick seller and a profitable side line with many seed dealers.

Made in all sizes, but only the one quality.

We offer Jobbers and Dealers every co-operation, and can show you a clear profit far in excess to the average item handled. Special discounts to catalog men and Jobbers. Write for free samples, printed matter, price list, etc. No obligation whatsoever.

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# POULTRY SECTION

## ITEMS ESSENTIAL TO A COMPLETE POULTRY SUPPLY LINE

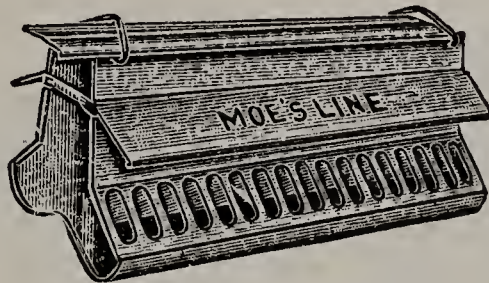
- |  |  |
|--|--|
| Animal Insecticides  | Glass Substitutes (to admit ultra-violet rays of sun)        |
| Animal Poultry Yeast   | Grit Hoppers   |
| Automatic Time Switches  | Grit (fine, medium, coarse; hard, sharp, cubical in shape)   |
| Batteries (Broilers and Poultry Fattening)                               | Heat Regulators  |
| Brood Coops (Metal and Wood)   | Incubators (50 to 500 egg size, electric hot water, hot air) |
| Brooder House Plans  | Leg Bands (Chick, growing stock and hen size)                |
| Brooder Stoves (Coal and Oil Burning)                                    | Lice Killers   |
| Brooders (Oil and Electric Heated)                                       | Meat Scraps  |
| Brooders (Feather)   | Mite Killers   |
| Brooders (Storage)   | Nest Eggs  |
| Burglar Alarms   | Nests (metal and trap)                                       |
| Buttermilk (Semi-Solid)  | Oats Sprouters   |
| Buttermilk (Dried)   | Oyster Shell (Reef Brand)                                    |
| Caponizing Sets  | Oyster Shell Hopper  |
| Charcoal   | Peat Moss (Poultry House Litter)                             |
| Cod Liver Oil  | Poultry Books  |
| Coops  | Poultry Feeds (Chick, growing stock, laying hens)            |
| Chick Boxes  | Pullets, 12, 16 and 18 weeks old                             |
| Crates   | Poultry House Plans  |
| Disinfectants  | Poultry Punches (web and toe)                                |
| Drinking Fountains (Metal and Earthenware, heated, unheated, Thermostat) | Poultry Remedies   |
| Dry Milk   | Pedigree Egg Baskets   |
| Egg Carriers   | Rat and Mice Killers   |
| Eggs for Hatching  | Root, Vegetable, Bone and Clover Cutters                     |
| Egg Cartons  | Roosts—Vermin Proof  |
| Egg Grading Scales   | Sprayers (Hand and Power)                                    |
| Egg Preservatives  | Scrapers for Dropping Boards                                 |
| Egg Scales   | Toe Pick Preventers  |
| Egg Testers  | Vaccines   |
| Electric Fountain Heaters  | Ventilators  |
| Feeders and Mash Hoppers (metal and wood)                                | Wafers, Thermostat   |
| Fencing, Poultry Wire (small and large mesh)                             | Wing Tags  |

For Sources of Supply on these or other items not listed, Consult our **POULTRY SERVICE DEPARTMENT** which supplies information and advice without charge.

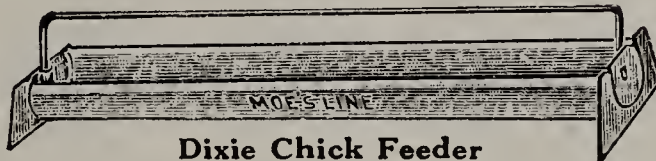
# MOE'S POULTRY SUPPLIES



Gem Chick  
Waterer



Moe's Big Boy Feeder



Dixie Chick Feeder



Leg Bands  
All Sizes and Colors

"Moe's Line"—Is a modern, complete line of good Poultry Equipment. Everything needed by the poultry raiser, moderate in price, and a profitable, satisfactory line to sell. Write for Catalog and Prices.

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ILLINOIS SUPPLY CO., 531 S. River St., Aurora, Ill.



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**ILLCO Line**  
to **PROFITS!**

Everything for Poultry  
and Pigeons, Bands,  
Fountains, Brooders,  
etc.

Send for dealers dis-  
counts and catalog.

Illco Band Display  
Card for your counter  
Free.



## Do You Handle Poultry Supplies?

There are numerous NEW DEVELOPMENTS  
in the poultry industry which should make the  
Seed Dealer Poultry Dept. more profitable.  
*For Particulars address Poultry Service Bureau*

# SEED WORLD

325 W. HURON STREET



CHICAGO

# Authorities Predict 1933 Banner Year for Poultry Industry

By EARL M. WHITNEY

**T**HE HISTORY of the poultry industry shows that it has always been very quick to adjust itself to changing conditions. That fact is again being proved as these lines are written. Up to January, 1932, this industry had not felt the depression to the degree that other farm products had been affected.

In January, however, there began a drop in egg and poultry meat prices that continued drastically downward until in late spring eggs were selling in some localities as low as 5c per dozen, the low mark of all time. Needless to say, at such prices poultry raising became very unprofitable and the poultry business of course was at a very low ebb. Fortunately this situation was of comparatively short duration. The late summer saw eggs back to normal prices, with the added advantage to the producer of very low feed costs. That condition has continued and many leading authorities in the poultry industry have gone on record to the effect that poultry farmers are facing a banner year in 1933. They emphasize the favorable low production costs which have failed to increase despite the steadily strengthening market toward fair prices for poultry products.

The exceedingly low egg price that existed in the late spring of 1932 had at least one good effect. It created an enormous market for eggs. Thousands upon thousands of people were eating eggs who would not have been able to afford them had not such a cheap price prevailed. No greater campaign could have been developed to create larger consumption of eggs had millions of dollars been spent in the effort. Economic conditions placed eggs within the reach of everyone. People were quick to take advantage of the situation. They became accustomed to having eggs, they found them nourishing and healthful. They liked them and it is safe to assume that they will continue to like them. Surely it is logical to believe that a custom thus developed will continue.

An improved financial situation which is already in sight at this writing, will enable these people to continue the habit they have formed of eating eggs. Therefore out of the depression has grown a greater potential egg market for the poultry farmer than it was deemed possible to develop even in the high tide of our greatest prosperity. Already there are signs of increased activity in poultry farming

to meet this greatly expanded demand for eggs. Thousands of people are buying stock with the idea of keeping at least enough laying hens to supply the home table with eggs. All of these people are prospective new customers for the dealer. They will buy baby chicks, feeds and equipment. They represent a big increase in business for the dealer during 1933. And those who have been in this business of raising poultry all along, are confronted with the necessity of expanding. There again is more business for the dealer.

Then too, the depression led many to do with the old equipment rather than replenish. The time has come now when all or most of this old equipment that has outlived its usefulness, must be replaced. With a rosy future assured, there will no longer be any hesitancy in buying the needed equipment to replace the old and likewise that required for expansion. That will be another source of increased business for the dealer in 1933.

During the period of the depression, live manufacturers availed themselves of the opportunity to improve and perfect their lines to a point where today so much improvement has been made that it is a matter of good business to supplant old equipment with the new, even though the old may be in good serviceable condition. As a matter of fact the keen competition of the present time actually compels the poultry farmer to use all of the new time and labor saving equipment. Much of all that is new in poultry supplies has a stronger influence on the health of the flock, a factor of vital importance to success.

Unquestionably there looms up an opportunity for volume business in poultry supplies for 1933. Someone is going to get that business in your community. The dealer that wants it will as surely have to take on the new, improved items that meet the requirements of the times. Upon the degree to which you prepare for this business will depend the volume of trade you obtain. The poultry department of SEED WORLD will be very glad to co-operate with you in preparing for these changed conditions.

Our service department can put you in touch with reliable and dependable sources of supply for the items it will be necessary to handle. Do not hesitate to call upon this publication for any advice or suggestions you may need. There is no charge for the service.



*More  
Sales*

Reg. U. S. Pat. Off.

# CLO-TRATE

(CONCENTRATED COD LIVER OIL)

## for Poultry

In the manufacture of Clo-trate, a high grade cod liver oil is concentrated by the removal of vitamin free fats. The highly concentrated vitamin-bearing portion is then mixed with just enough of the oil to insure preservation of the vitamins and to permit uniform mixing with the feed. In no other way can so high a proportion of both vitamins A and D from cod liver oil be obtained with so small a quantity of fats.

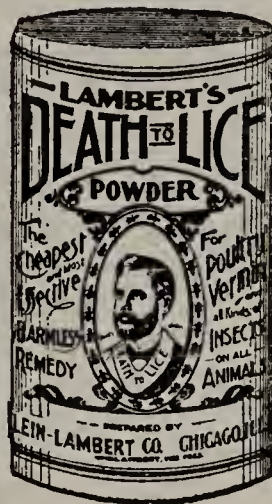
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**HEALTH PRODUCTS CORP.**

113 North 13th St. :: Newark, N. J.  
323 West Polk St. :: Chicago, Ill

## 40 Years The Universal Favorite

Successful Seed Dealers everywhere tell you there is nothing equal to



The Old Reliable  
Lambert's  
Death to Lice  
Powder

for sitting hens or Exhibition stock. It does the work quickly, easily and without injury to eggs, hens or chicks.

### DEALERS' PRICES

1/2 Doz. 100 oz. .... \$4.00 per case  
1 doz. 48 oz. .... 4.00 per case  
2 Doz. 15 oz. .... 4.00 per case  
Retail at \$1.00, 50c and 25c per Pkg.

Order direct or through your Jobber

**THE KLEIN-LAMBERT CO.**

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Illinois

(Chicago Suburb)

# FOR NEWS OF ALL LATEST DEVELOPMENTS IN THE POULTRY INDUSTRY

Read  
Seed World Poultry Department

Every Issue

IF YOU WANT INFORMATION ON ANYTHING  
PERTAINING TO POULTRY SUPPLIES, CONSULT  
SEED WORLD BUREAU OF POULTRY  
INFORMATION WHICH IS AT YOUR SERVICE  
WITHOUT CHARGE

## Seedsman Should Sell Feed Concentrates

THE FARMER who grows corn, wheat and oats and is also raising chickens, feels that he should use as much of his own grain as possible for feed. To meet this situation and give to the farmer a balanced ration for his poultry flocks, many manufacturers have prepared concentrates to which the farmer can add home grown grains. These concentrates contain minerals, meat scraps, fish meal, cod liver oil, yeast and various other ingredients which the farmer would have to buy separately and then know the proper percentages to use in order to mix a balanced ration. By purchasing the

concentrate, the job is made easy as instructions for mixing are furnished by the manufacturer—all that is necessary is to follow the simple directions given and the farmer's problem of utilizing home grown grains is solved without detriment to the health and productivity of his birds.

Feed concentrates should sell well to the farming trade and dealers ought to handle a good concentrate that will help the farmers to solve their feeding problems at the lowest possible cost without harmful results.

## Window Displays Increase Sales

THE POULTRY business offers the dealer an opportunity to liven up window displays to a degree that will not only increase poultry supply sales but other lines of merchandise as well. A window display of baby chicks or baby ducklings never fails to draw people into the store, where many other things of interest may be brought to their attention. There are many dealers who will tell you they have found the selling of chicks and ducklings profitable and at the same time emphasize the influence they have upon other business.

This practice can be carried along to

include growing pullets that have passed the danger age of the first eight weeks of chickhood. Many customers prefer to buy the pullets instead of chicks. All make a window attraction of a value that cannot be overestimated. In the case of growing pullets and matured birds, only a number sufficient for window purposes need be kept in the store. For orders, arrangements can be made with a reliable poultry farm to ship direct to your customers upon your order.

Try out this window display plan and you will be sold on its value as a result of your experience.

## Sell Poultry Leg and Wing Bands!

SCIENTIFIC poultry raising has come to stay. Unless scientific methods are practiced, failure results. One of the very definite requirements in scientific poultry raising is proper identification of birds so that pedigree records may be preserved. It is necessary to leg or wing band fowls so as to establish hereditary lines. This method is widely practiced and as a result there has grown a large volume of sales in these items.

Every dealer in poultry supplies should stock a complete line of bands for poultry.

An idea of the immense sale may be obtained in the activity of manufacturers of these items. One company operates several machines that turn out tens of thousands of these bands daily. A complete counter display card is furnished dealers that is very effective in making sales.

## World's Fair Will Have International Egg Laying Contest

The National Poultry Council will sponsor and operate an International Egg Laying Contest at the Chicago World's Fair. The contest will open May 1, 1933, and close October 29, 1933. One hundred houses, size 12' x 12', will contain two pens of 15 females each and a male bird—1,600 layers and 200 males in all.

This egg laying contest has been allotted an important location along Leif Erickson Drive, which is the main inner drive of the Exhibition grounds. It will occupy between two and three acres of land and will include a small hatchery from which baby chicks will be sold to visitors.

## POULTRY SUPPLIES

### AUTOMATIC ELECTRIC TIME SWITCH

Illinois Supply Co.  
Aurora, Ill.  
(See Adv. on Page 133)

### AUTOMATIC VALVE AND FLOATS

Illinois Supply Co.  
Aurora, Ill.  
(See Adv. on Page 133)

### BABY CHICKS

Ada Baby Chick Hatchery  
Ada, Ohio  
Aitz Blue Mound Hatchery Co.  
Milltown, Ind.  
Arrowhead Poultry Farm  
Lapeer, Mich.  
Barr & Son, P.  
Zeeland, Mich.  
Berry's Poultry Farm  
Clarinda, Iowa  
Capital Poultry Farm & Hatchery  
Columbia, S. C.  
Clover Valley Poultry Farm & Hatchery  
Ramsey, Ind.  
Davis Poultry Farm  
Ramsey, Ind.  
Golden Rule Hatchery  
Bucyrus, Ohio  
Endwell Hatcheries  
Binghamton, N. Y.  
Geneva Hatcheries  
Geneva, Ind.  
Hayes Bros.  
Decatur, Ill.  
Hoosier Chick Hatchery  
Indianapolis, Ind.  
Hoytville Hatcheries  
Hoytville, Ohio  
Illinois Hatchery  
Metropolis, Ill.  
Huber's Reliable Hatchery  
Fostoria, Ohio  
Johnson Hatchery, A.M.  
Leonardville, Kan.  
Knoxville Hatchery  
Knoxville, Tenn.  
Lakeview Poultry Farm  
Holland, Mich.  
Maplewood Hatchery  
Lanesville, Ind.  
Marion Hatcheries  
Marion, Ohio  
Meadow View Hatchery  
St. Peter, Minn.  
Miller Hatcheries, Inc.  
Lancaster, Mo.  
Missouri Hatchery  
Bowling Green, Mo.  
Moweaqua Seed Co. Hatchery  
Moweaqua, Ill.  
Nabob Poultry Farms  
Gambier, Ohio  
O. K. Chick Hatchery  
Frenchtown, N. J.  
Reinhart's Hatchery  
New Salisbury, Ind.  
Rural Poultry Farm  
Zeeland, Mich.  
Smith Chickeries  
Mexico, Mo.  
Swegler's Hatcheries  
Buffalo, N. Y.  
St. Paul Hatchery  
St. Paul, Minn.  
Sterling Hatchery  
Ramsey, Ind.  
Silver Lake Egg Farm  
Silver Lake, Ind.  
Sunshine Hatcheries  
Corydon, Ind.  
Triple "C" Hatcheries  
Centerville, Iowa  
Van Wert Hatchery  
Van Wert, Ohio

### BABY CHICK BOXES

Illinois Supply Co.  
Aurora, Ill.  
(See Adv. on Page 133)  
Kelger Copping Co.  
Milwaukee, Wis.

### BROODERS

(Coal, Oil Burning, Feather, Gas and Electric)  
Brower Mfg. Co.  
Quincy, Ill.  
Buckeye Incubator Co.  
Springfield, Ohio  
General Metalware Corp.  
Minneapolis, Minn.  
Hoeft & Co.  
North Chicago, Ill.  
(See Adv. on Pages 133 and 134)  
Hudson Mfg. Co., H. D.  
Chicago, Ill.  
Illinois Supply Co.  
Aurora, Ill.  
(See Adv. on Page 133)  
James Mfg. Co.  
Fort Atkinson, Wis.  
Nabob Poultry Farms  
Gambier, Ohio  
Oakes Mfg. Co.  
Tipton, Ind.  
Phelan Brooder Co.  
Oklahoma City, Okla.  
Purman, John G. (Feather)  
Tinley Park, Ill.  
Putnam, Inc., I.  
Elmhurst, N. Y.  
Reliable Incubator & Brooder Co.  
Quincy, Ill.  
Sheer Co., H. M.  
Quincy, Ill.  
Simplex Brooder Stove Co.  
Grand Rapids, Mich.

### BROODERS—STORAGE

Buckeye Incubator Co.  
Springfield, Ohio  
Oakes Mfg. Co.  
Tipton, Ind.

### CARBOLINEUM

Carbolineum Wood Preserving Co.  
Milwaukee, Wis.

### CHARCOAL

Chesmore Seed Co.  
St. Joseph, Mo.  
(See Adv. on Page 13)  
Gulf City Mfg. Co.  
Mobile, Ala.  
Tennessee Eastman Corp.  
Kingsport, Tenn.

### CHICKEN MITE KILLER

C-A Wood Preserver Co.  
St. Louis, Mo.  
Electric Spray Co.  
South Bend, Ind.

### CONCENTRATED COD LIVER OIL

Health Products Co.  
Newark, N. J.  
(See Adv. on Page 133)  
National Oil Products Co.  
Harrison, N. J.

### DISINFECTANTS

Allen Mfg. Co., Inc., H. E.  
Carthage, N. Y.  
Ansul Chemical Co.  
Marinette, Wis.  
(See Adv. on Page 133)  
Carbola Chemical Co.  
Natural Bridge, N. Y.

## POULTRY SUPPLIES—Continued

## Disinfectants—Continued

- Carbolineum Wood Preserving Co.  
Milwaukee, Wis.
- Carco Spray Co., Inc.  
Tacoma, Wash.
- Chipman Chem. Co., Inc.  
Bound Brook, N. J.  
(See Adv. on Page 99)
- Conkey Co., G. E.  
Cleveland, Ohio
- Dugger Mfg. Co., I. G.  
Hope Hull, Ala.
- Electric Sprayit Co.  
South Bend, Ind.
- Frost Insecticides  
Arlington, Mass.
- Gateway Chemical Co., Inc.  
Kansas City, Mo.
- General Laboratories, Inc.  
Madison, Wis.
- Germo Mfg. Co.  
St. Louis, Mo.
- Good, Inc., James  
Philadelphia, Pa.
- Grasselli Chemical Co.  
Cleveland, Ohio  
(See Adv. on Second Cover)
- Hess & Clark, Inc., Dr.  
Ashland, Ohio
- LeGear Medicine Co., Dr. L. D.  
St. Louis, Mo.
- Magic Stock Remedy Co., Inc.  
Chattanooga, Tenn.
- Merck & Co., Inc.  
Rahway, N. J.
- Nicotine Mfg. Co.  
St. Louis, Mo.  
(See Adv. on Page 99)
- Pratt Food Co.  
Philadelphia, Pa.
- Shepard Laboratories  
Council Bluffs, Iowa
- Sheps Stock Dip and Barnyard Spray  
(See Adv. on Page 101)
- Sherwin-Williams  
Cleveland, Ohio
- Smith & Co., D. B.  
Utica, N. Y.
- Sterilac Co., The  
North Chicago, Ill.
- Tobacco By-Products and Chemical Corp.  
Louisville, Ky.  
(See Adv. on Front Cover)

## DRINKING FOUNTAINS

- Advance Mfg. Co.  
Tipton, Ind.
- Baier Bros. Mfg. Co.  
Cissna Park, Ill.
- Cyclone Mfg. Co., The  
Urbana, Ind.
- Felker, C. H.  
Boston, Mass.
- Hoeft & Co., Inc.  
North Chicago, Ill.  
(See Adv. on Pages 105 and 133)
- Hudson Mfg. Co., H. D.  
Chicago, Ill.
- Illinois Supply Co.  
Aurora, Ill.  
(See Adv. on Page 133)
- James Mfg. Co.  
Ft. Atkinson, Wis.
- Magnolia Seed Co.  
Dallas, Tex.
- Mit-Shel Stamping Mfg. Co.  
Quincy, Ill.
- National Poultry Band Co.  
Newport, Ky.
- Oakes Mfg. Co.  
Tipton, Ind.
- Phelan Brooder Co.  
Oklahoma City, Okla.
- Reliable Incubator & Brooder Co.  
Quincy, Ill.
- Sheer Co., H. M.  
Quincy, Ill.
- Simplex Brooder Stove Co.  
Grand Rapids, Mich.
- Thompson & Sons, O. E.  
Ypsilanti, Mich.

## DUCKLINGS

- Moweaqua Seed Co. Hatchery.  
Moweaqua, Ill.
- Ridgeway Duck Hatchery  
La Rue, Ohio

## EGG BASKETS

- Illinois Supply Co.  
Aurora, Ill.  
(See Adv. on Page 133)

## EGG CARTONS

- Gaylord, Inc., Robert  
St. Louis, Mo.
- Hinde & Dauch Paper Co.  
Sandusky, Ohio
- Hoeft & Co.  
North Chicago, Ill.  
(See Adv. on Pages 105 and 133)

- Illinois Supply Co.  
Aurora, Ill.  
(See Adv. on Page 133)

- Metal Egg Crate Co.  
Fredericksburg, Va.
- Safe-Service Egg Case Co.  
Three Rivers, Mich.
- Standard Trunk Mfg. Co. (Fibre)  
New York, N. Y.
- Surety Egg Box Co.  
Hohokus, N. J.

## EGG PRESERVATIVES

- California Egg Preserver Co.  
San Francisco, Calif.

## ELECTRIC BURGLAR ALARMS

- Illinois Supply Co.  
Aurora, Ill.  
(See Adv. on Page 133)

## EGG SCALES

- Illinois Supply Co.  
Aurora, Ill.  
(See Adv. on Page 133)

## EXHIBITION COOPS

- Illinois Supply Co.  
Aurora, Ill.  
(See Adv. on Page 133)

ELECTRIC LIGHT BULBS AND  
ULTRA VIOLET EQUIPMENT

- Illinois Supply Co.  
Aurora, Ill.  
(See Adv. on Page 133)

## FEED—POULTRY

- Ackerman Company  
Lima, Ohio  
(See Adv. on Page 27)
- Allied Mills  
Chicago, Ill.
- American Dry Milk Institute  
Chicago, Ill.
- Badenoch Co., J. J.  
Chicago, Ill.
- Blamberg Bros., Inc.  
Baltimore, Md.  
(See Adv. on Page 59)
- Casco Grain Co.  
Omaha, Neb.
- Chapin & Co.  
Hammond, Ind.
- Conkey Co., G. E.  
Cleveland, Ohio
- Darling & Co.  
Chicago, Ill.
- Dickinson Co., The Albert  
Chicago, Ill.
- Goldberg Seed & Feed Co.  
Fargo, N. D.
- Happy Feed Mills, Inc.  
Memphis, Tenn.
- Harvey Seed Co.  
Buffalo, N. Y.
- Hardeman-King Co.  
Amarillo, Texas

## POULTRY SUPPLIES—Continued

## Feed-Poultry—Continued

- Health Products Corp. (Clo-Trate)**  
Newark, N. J.  
(See Adv. on Page 135)
- Hoeft & Co.**  
North Chicago, Ill.  
(See Adv. on Pages 105 and 133)
- Jameson-Hevener Co.**  
St. Paul, Minn.
- Krause Milling Co.**  
Milwaukee, Wis.
- Magill & Co.**  
Fargo, N. D.
- Magnolia Seed Co.**  
Dallas, Texas
- Marden-Wild Corp. (Cod Liver Oil)**  
Somerville, Mass.
- Mead, Johnson & Co.**  
(Cod Liver Oil Stearine)  
Evansville, Ind.
- Minneapolis Seed Co.**  
Minneapolis, Minn.  
(See Adv. on Page 17)
- National Oil Products Co. (Cod Liver Oil)**  
Harrison, N. J.
- Northrup, King & Co.**  
Minneapolis, Minn.  
(See Adv. on Page 21)
- Northwestern Yeast Co. (Yeast)**  
Chicago, Ill.
- Nowak Milling Co.**  
Hammond, Ind.
- Ouren Seed Co.**  
Council Bluffs, Iowa  
(See Adv. on Page 25)
- Park, Inc., Philip R.**  
San Pedro, Calif.
- Philadelphia Seed Co.**  
Philadelphia, Pa.  
(See Adv. on Page 20)
- Pratt Food Co.**  
Philadelphia, Pa.
- Radwaner Seed Co., I. L.**  
New York City, N. Y.  
(See Adv. on Pages 63 and 81)
- Ralston Purina Co.**  
St. Louis, Mo.
- Scarlett & Co., Wm. G.**  
Baltimore, Md.
- Tioga Mill & Elevator Co.**  
Waverly, N. Y.
- Ubiko Milling Co.**  
Cincinnati, Ohio
- Universal Mills**  
Ft. Worth, Texas
- Vitality Mills**  
Chicago, Ill.
- Wells Milling Co., A. G.**  
Depere, Wis.
- Wilson & Co., Inc.**  
Chicago, Ill.
- Wood & Sons, T. W.**  
Richmond, Va.

## FEED HOPPERS

- Advance Mfg. Co.**  
Tipton, Ind.
- Bernard Co., Phillip**  
Sioux City, Iowa
- Cyclone Mfg. Co., The**  
Urbana, Ind.
- Felker, C. H.**  
Boston, Mass.
- Hoeft & Co., Inc.**  
North Chicago, Ill.  
(See Adv. on Pages 105 and 133)
- Hudson Mfg. Co., H. D.**  
Chicago, Ill.
- Illinois Supply Co.**  
Aurora, Ill.  
(See Adv. on Page 133)
- Jacobus, M. R.**  
New York, N. Y.
- James Mfg. Co.**  
Ft. Atkinson, Wis.
- Magnolia Seed Co.**  
Dallas, Texas

- Mit-Shel Stamping Mfg. Co.**  
Quincy, Ill.
- Oakes Mfg. Co.**  
Tipton, Ind.
- Phelan Brooder Co.**  
Oklahoma City, Okla.
- Pittsburg Pottery Co.**  
Pittsburg, Kan.
- Reliable Incubator & Brooder Co.**  
Quincy, Ill.
- Thompson & Sons, O. E.**  
Ypsilanti, Mich.
- Wasteless Feeder Co.**  
Sauk City, Wis.

## GLASS—ARTIFICIAL

- Acetol Products Co.**  
New York, N. Y.
- Allen Brothers, Inc.**  
Omaha, Nebr.
- Fleming Bros.**  
Chicago, Ill.  
(See Adv. on Page 111)
- Flex-O-Glass Mfg. Co.**  
Chicago, Ill.
- Hoeft & Co., Inc.**  
North Chicago, Ill.  
(See Adv. on Pages 105 and 133)
- New York Wire Cloth Co.**  
New York, N. Y.
- Turner Bros.**  
Bladen, Neb.
- Vita Glass Corp.**  
New York, N. Y.

## GRIT

- Georgia Mineral Products Co.**  
Tate, Ga.
- Limestone Products Corp. of America**  
Newton, N. J.
- Louisiana Crushing Co.**  
Houma, La.
- Ober & Sons Co., G.**  
Baltimore, Md.
- Ohio Marble Co.**  
Piqua, Ohio

## INCUBATORS

- Automatic Incubator Co.**  
Delaware, Ohio
- Buckeye Incubator Co.**  
Springfield, Ohio
- Hoeft & Company, Inc.**  
North Chicago, Ill.  
(See Adv. on Pages 105 and 133)
- Illinois Supply Co.**  
Aurora, Ill.  
(See Adv. on Page 133)
- James Mfg. Co.**  
Ft. Atkinson, Wis.
- Oakes Mfg. Co.**  
Tipton, Ind.
- Petersime & Son, Ira M.**  
Gettysburg, Ohio
- Reliable Incubator & Brooder Co.**  
Quincy, Ill.
- Smith Incubator Co.**  
Cleveland, Ohio
- Smith Co., Wellington J.**  
Cleveland, Ohio

## LEG BANDS

- Bayerdorfer, M.**  
Huguenot Park, N. Y.
- Felker, C. H.**  
Boston, Mass.
- Hoeft & Co., Inc.**  
North Chicago, Ill.  
(See Adv. on Pages 105 and 133)
- Illinois Supply Co.**  
Aurora, Ill.  
(See Adv. on Page 133)
- National Poultry Band Co.**  
Newport, Ky.
- Oakes Mfg. Co.**  
Tipton, Ind.
- Stiles, Charles L.**  
Columbus, Ohio

## POULTRY SUPPLIES—Continued

## LICE KILLERS

- Allaire, Woodward & Co.  
Peoria, Ill.  
**"Black Leaf 40"**  
**Tobacco By-Products & Chemical Corp.**  
Louisville, Ky.  
(See Adv. on Front Cover)
- Burrell-Dugger Co.  
Indianapolis, Ind.
- Carbola Chemical Co.  
Natural Bridge, N. Y.
- Carbolineum Wood Preserving Co.  
Milwaukee, Wis.
- Carco Spray Co., Inc.  
Tacoma, Wash.
- Electric Sprayit Co.  
South Bend, Ind.
- Gateway Chemical Co., Inc.  
Kansas City, Mo.
- Good, Inc., James  
Philadelphia, Pa.
- Klein-Lambert Co., The**  
**Blue Island, Ill.**  
(See Adv. on Page 135)
- Lee Co., Geo. H.  
Omaha, Neb.
- LeGear Medicine Co., Dr. L. D.  
St. Louis, Mo.
- Merck & Co., Inc.  
Rahway, N. J.
- National Poultry Band Co.  
Newport, Ky.
- Nicotine Mfg. Co.**  
**St. Louis, Mo.**  
(See Adv. on Page 99)
- Pratt Food Co.  
Philadelphia, Pa.
- Reynolds Mfg. Co.  
Fredericktown, Ohio
- Shepard Laboratories**  
**Council Bluffs, Iowa**  
**Sheps Wood Preserver and Lice**  
**Killer**  
(See Adv. on Page 101)
- Sherwin-Williams Co.  
Cleveland, Ohio
- Smith & Co., D. B.  
Utica, N. Y.
- Uniform Products Co.  
New York, N. Y.

## MARKING PUNCHES

- Bayerdorfer, M.  
Huguenot Park, N. Y.
- Hoeft & Co.**  
**North Chicago, Ill.**  
(See Adv. on Pages 105 and 133)
- Illinois Supply Co.**  
**Aurora, Ill.**  
(See Adv. on Page 133)
- National Poultry Band Co.  
Newport, Ky.

## MEAT SCRAPS

- Badenoch Co., J. J.  
Chicago, Ill.
- Conkey Co., The G. E.  
Cleveland, Ohio
- Darling & Co.  
Chicago, Ill.
- Ober & Sons Co., G.  
Baltimore, Md.
- Parmenter & Polsey Fertilizer Co.  
Boston, Mass.
- Reading Bone Fertilizer Co.  
Reading, Pa.
- Stadler Products Co.  
Cleveland, Ohio
- Swift & Co.  
Chicago, Ill.
- Wilson & Co., Inc.  
Chicago, Ill.

## MOISTURE GUIDES

- Illinois Supply Co.**  
**Aurora, Ill.**  
(See Adv. on Page 133)

## NESTS

- Brower Mfg. Co.  
Quincy, Ill.
- Hoeft & Co., Inc.**  
**North Chicago, Ill.**  
(See Adv. on Pages 105 and 133)
- Illinois Supply Co.**  
**Aurora, Ill.**  
(See Adv. on Page 133)
- Nieman Bros. Mfg. Co.  
Mt. Olive, Ill.
- Oakes Mfg. Co.  
Tipton, Ind.

## NEST EGGS

- Hoeft & Co., Inc.**  
**North Chicago, Ill.**  
(See Adv. on Pages 105 and 133)
- Illinois Supply Co.**  
**Aurora, Ill.**  
(See Adv. on Page 133)
- Opal Glass Co.  
Fairmont, W. Va.
- Reynolds Mfg. Co.  
Fredericktown, Ohio
- Wood & Sons, T. W.  
Richmond, Va.

## OYSTER SHELLS

- Badenoch Co., J. J.  
Chicago, Ill.
- Conkey Co., The G. E.  
Cleveland, Ohio
- Gulf Crushing Co., Inc.  
New Orleans, La.

## PIGEON SUPPLIES

- Bayerdorfer, M.  
Huguenot Park, N. Y.
- Conkey Co., The G. E. (Feeds)  
Cleveland, Ohio
- Cyclone Mfg. Co., The  
Urbana, Ind.
- Dickinson Co., The Albert (Feeds)  
Chicago, Ill.
- Hews & Co., A. H. (Nests)  
Cambridge, Mass.
- Illinois Supply Co.**  
**Aurora, Ill.**  
(See Adv. on Page 133)
- Mussog's Bird Store  
Philadelphia, Pa.
- National Pet Shops  
St. Louis, Mo.
- Nowak Milling Co. (Feed)  
Hammond, Ind.
- Philadelphia Seed Co. (Feed)**  
**Philadelphia, Pa.**  
(See Adv. on Page 20)
- Scarlett & Co., Wm. G.  
Baltimore, Md.
- Silvertone Co. (Feed)  
New York, N. Y.

## POULTRY LITTER

- Bienenfeld Importing Co.  
Chicago, Ill.
- Bremermann & Co., Ernst  
New York, N. Y.
- Ideal Peat Moss Co.  
New York, N. Y.
- Julius Loewith, Inc.  
New York, N. Y.
- Mount Arbor Nurseries**  
**Shenandoah, Iowa**  
(See Adv. on Page 90)
- The O. K. Co.  
New York, N. Y.
- St. Louis Seed Co.**  
**St. Louis, Mo.**  
(See Adv. on Page 59)

## POULTRY REMEDIES

- American Dry Milk Institute  
Chicago, Ill.
- Atlanta Chemical Co.  
Atlanta, Ga.

## POULTRY SUPPLIES—Concluded

## Poultry Remedies—Continued

Barnes Emulsion Co.  
Gardena, Calif.  
Bee Dee Stock Medicine Co.  
Chattanooga, Tenn.  
"Black Leaf 40"  
Tobacco By-Products & Chemical Corp.  
Louisville, Ky.

(See Adv. on Front Cover)

Burrell-Dugger Co.  
Indianapolis, Ind.  
Carbola Chemical Co.  
Natural Bridge, N. Y.  
Columbus Vaccine Co.  
Columbus, Ohio  
Conkey Co., G. E.  
Cleveland, Ohio  
French Co., R. T.  
Rochester, N. Y.  
General Laboratories, Inc.  
Madison, Wis.  
Germo Mfg. Co.  
St. Louis, Mo.  
Gland-O-Lac Co.  
Omaha, Neb.  
Glover Co., Inc., H. Clay  
New York, N. Y.  
Good, Inc., James  
Philadelphia, Pa.

Hand Seed Co., Inc., A. M.  
Portland, Ore.

(See Adv. on Page 47)

Hess & Clark, Inc., Dr.  
Ashland, Ohio

Klein-Lambert Co.  
Blue Island, Ill.

(See Adv. on Page 135)

Lee Co., Geo. H.  
Omaha, Neb.  
LeGear Medicine Co., Dr. L. D.  
St. Louis, Mo.  
Magic Stock Remedy Co., Inc.  
Chattanooga, Tenn.  
Nabob Poultry Farms  
Gambier, Ohio  
Old Kentucky Mfg. Co.  
Paducah, Ky.  
Pearson-Ferguson Co.  
Kansas City, Mo.  
Pratt Food Co.  
Philadelphia, Pa.  
Russell Co., I. D.  
Kansas City, Mo.  
Salsbury, Dr. J. E.  
Charles City, Iowa  
Sheer Co., H. M.  
Quincy, Ill.  
South Mountain Hennerly Co., The  
Middletown, Md.  
Standard Chem. Mfg. Co.  
Omaha, Nebr.  
Trenrove Poultry Farm  
Portland, Ore.  
Uniform Products Co.  
New York, N. Y.  
Wight Company  
Lamoni, Iowa  
Wood & Sons, T. W.  
Richmond, Va.

## POULTRY HOUSES

Beck Bros.  
Herrick, Ill.

## POULTRY TATOO MARKERS

Illinois Supply Co.  
Aurora, Ill.  
(See Adv. on Page 133)

## RABBIT SUPPLIES

Illinois Supply Co.  
Aurora, Ill.  
(See Adv. on Page 133)

## SCRAPERS—DROP BOARD

C-K-R Co.  
Cleveland, Ohio

## SODIUM FLUORIDE

Burrell-Dugger Co.  
Indianapolis, Ind.  
Carbolineum Wood Preserving Co.  
Milwaukee, Wis.  
Grasselli Chemical Co., The  
Cleveland, Ohio  
(See Adv. on Second Cover)  
Merck & Co., Inc.  
Rahway, N. J.  
Virginia-Carolina Chemical Corp.  
Richmond, Va.

## TOBACCO POWDER

Nicotine Production Corp.  
Clarksville, Tenn.  
Tobacco By-Products & Chemical Corp.  
Louisville, Ky.  
(See Adv. on Front Cover)  
Uniform Products Co.  
New York, N. Y.

## TURKEYS

Ridgeway Duck Hatchery  
La Rue, Ohio

## UNIT HEATERS

Illinois Supply Co.  
Aurora, Ill.  
(See Adv. on Page 133)

## WAFER THERMOSTATS

Illinois Supply Co.  
Aurora, Ill.  
(See Adv. on Page 133)

## WING BANDS

Illinois Supply Co.  
Aurora, Ill.  
(See Adv. on Page 133)

## WORM MEDICINE

Barnes Emulsion Co.  
Gardena, Calif.  
Le Gear Medicine Co., Dr. L. D.  
St. Louis, Mo.  
Merck & Co., Inc.  
Rahway, N. J.  
Pratt Food Co.  
Philadelphia, Pa.

## USE THIS GUIDE!

To locate sources of seed supplies (page 44).  
To locate sources of merchandise supplies (page 102).  
For information on seed prices (page 18, 20, 24, 26, 29 and 60).  
For tariff information (page 28).  
For weed seed identification (pages 10 to 14).  
For information on seed verification service (page 30).  
For foreign seed import information (pages 22 and 23).  
For trade marks and slogans (pages 40, 41, 42 and 43).  
For latest spraying information (pages 98 and 100).  
For other seed and plant information.

## STOCK FOODS AND REMEDIES

### STOCK FOODS

Allied Mills  
Chicago, Ill.  
American Dry Milk Institute  
Chicago, Ill.  
Badenoch Co., J. J.  
Chicago, Ill.  
Blatchford Calf Meal Co.  
Waukegan, Ill.  
Casco Grain Co.  
Omaha, Neb.  
Corn Products Refining Co.  
New York, N. Y.  
Curtin Company, George L.  
New York, N. Y.  
Dacotah Seed Co.  
Bismarck, N. D.  
Dairy Association Co., Inc.  
Lyndonville, Vt.  
Happy Feed Mills, Inc.  
Memphis, Tenn.  
Hardeman-King Co.  
Amarillo, Texas  
International Sugar Feed Co.  
Minneapolis, Minn.  
Magic Stock Remedy Co., Inc.  
Chattanooga, Tenn.  
Nowak Milling Corporation  
Hammond, Ind.  
Penick & Ford Sales Co., Inc.  
Cedar Rapids, Iowa  
Pratt Food Co.  
Philadelphia, Pa.  
Ralston Purina Co.  
St. Louis, Mo.  
Security Calf Food Co.  
Minneapolis, Minn.  
Vitality Mills  
Chicago, Ill.  
Ubiko Milling Co.  
Cincinnati, Ohio  
Wilson & Co., Inc.  
Chicago, Ill.

### STOCK REMEDIES

Allen Mfg. Co., Inc., H. E.  
Carthage, N. Y.  
Bee Dee Stock Medicine Co.  
Chattanooga, Tenn.  
Blackman Stock Remedy Co.  
Chattanooga, Tenn.  
Carbola Chemical Co.  
Natural Bridge, N. Y.  
Dairy Association Co.  
Lyndonville, Vt.  
**Fleming Bros.**  
Chicago, Ill.  
(See Adv. on Page 111)  
Gland-O-Lac Co.  
Omaha, Neb.  
Glover Co., Inc., H. Clay  
New York, N. Y.  
Happy Feed Mills, Inc.  
Memphis, Tenn.  
Hess & Clark, Inc., Dr.  
Ashland, Ohio  
International Sugar Feed Co.  
Minneapolis, Minn.  
Lee Co., Geo. H.  
Omaha, Neb.  
LeGear Medicine Co., Dr. L. D.  
St. Louis, Mo.  
Lusterine Mfg. Co., Inc.  
Bridgeport, Conn.  
Magic Stock Remedy Co., Inc.  
Chattanooga, Tenn.  
Nowak Milling Co.  
Hammond, Ind.  
Pratt Food Co.  
Philadelphia, Pa.  
Security Calf Food Co.  
Minneapolis, Minn.  
Sherwin-Williams  
Cleveland, Ohio  
Standard Chemical Mfg. Co.  
Omaha, Neb.  
Uniform Products Co.  
New York, N. Y.

## MISCELLANEOUS SIDE LINES

### BEE SUPPLIES

Dadant & Sons  
Hamilton, Ill.  
Kilgore Seed Co.  
Plant City, Fla.  
Leahy Mfg. Co.  
Higginsville, Mo.  
Lewis Co., G. B.  
Watertown, Wis.  
(See Adv. on Page 143)  
Root Co., A. I.  
Medina, Ohio  
(See Adv. on Page 143)  
Scott Co., I. W.  
Pittsburgh, Pa.

### BOOKS ON FARMING AND GARDENING

DeLaMare Co., Inc., A. T.  
New York City, N. Y.  
Doubleday, Page & Co.  
Garden City, N. Y.  
Lippincott Co., J. B.  
Philadelphia, Pa.  
Little, Brown & Co.  
Boston, Mass.  
MacMillan Co., The  
New York City, N. Y.  
Orange Judd Publ. Co., Inc.  
New York City, N. Y.

### BOWLS—BULB

Brush Pottery Co.  
Zanesville, Ohio  
Haeger Potteries  
Dundee, Ill.

Louisville Pottery Co., Inc.  
Louisville, Ky.  
Paducah Pottery Co.  
Paducah, Ky.  
Pittsburg Pottery Co.  
Pittsburg, Kan.  
Roseville Pottery Co.  
Zanesville, Ohio  
Uhl Pottery Co.  
Evansville, Ind.  
Wells Glass Co. (Colored Glass Chips)  
Kokomo, Ind.  
Western Stoneware Co.  
Monmouth, Ill.  
Zane Pottery Co.  
So. Zanesville, Ohio

### DAIRY SUPPLIES

Biesecker, J. S.  
New York, N. Y.  
Cherry-Burrell Corp.  
New York, N. Y.  
Creamery Package Mfg. Co.  
New York, N. Y.  
De Laval Separator Co.  
New York, N. Y.  
Duane Egg Products Co.  
New York, N. Y.  
Dugger Mfg. Co., I. G.  
Hope Hull, Ala.  
Fucoma Company  
New York, N. Y.  
Mojonnier Bros. Co.  
New York, N. Y.  
Pilling & Son Co., G. P.  
Philadelphia, Pa.

## Many Seedsmen Handle Beeware

Here is a profitable side line now handled by many of the best seed houses because it brings into their store customers for this specialty who also become purchasers of seeds. Let us tell you of our plan of direct mail which brings you buyers who have been going elsewhere for their seeds. We will supply names of satisfied seedsmen near you who consider Lewis Beeware indispensable. Warehouses near you to reduce transportation charges. Ask for our 1933 seedsmen plan.

**G. B. LEWIS COMPANY**

Watertown



Wisconsin

**Our Mailings Help  
You Increase Sales**

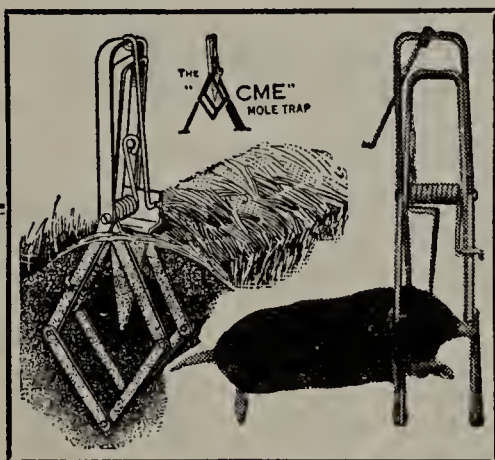
## New Customers for You

Sell  
**ROOT**  
Bee Supplies

Root Quality Bee Supplies are recognized by beekeepers everywhere as the best. We cooperate with our dealers in advertising. 1933 will be a fine year to sell bee supplies to beginners. Write us at once for full particulars.

The  
**A. I. Root Co.**  
Medina, Ohio  
BOX L.

**Root**  
QUALITY  
BEE SUPPLIES



THE **ACME** MOLE TRAP IS  
SUPERIOR IN ALL RESPECTS

**SAFE—SURE—SMALL  
EASILY SET—RUST PROOF**

Most Efficient Mole Trap  
on the Market

Highly Endorsed Wherever Used  
Retails at \$2.00 Each and Worth It!

Write for Prices, Circulars, Etc.

**C. E. GRELLE**, Manufacturer  
GREEN HILLS, PORTLAND, ORE.

ROMAINE B. WARE, BRIDGETON, N. J.  
Eastern Representative



## CROW DOPE

Used to treat Seed Corn to prevent Crows, Blackbirds, etc., from pulling and eating it after planting. They don't like it. Not a Poison.

### RETAIL PRICES

1 bushel size (1/2 pt.)	..... \$ .60
2 bushel size (1 pt.)	..... 1.00
4 bushel size (1 qt.)	..... 1.50

## WHY PAY MORE?

Dealers write for discounts

Manufactured only by

**THE A. J. PHILLIPS CO.**  
NORWOOD NEW YORK

## MISCELLANEOUS SIDE LINES—Concluded

**Dairy Supplies—Continued**

Pratt Mfg. Co., Wm. E.  
Joliet, Ill.  
Rice & Adams Corp.  
New York, N. Y.  
Schiffner Dairy Men's Supply Co.  
New York, N. Y.  
Spolter Bros. Co.  
New York, N. Y.  
Toledo Bottle Cap Co.  
Toledo, Ohio  
Wisner Mfg. Co.  
New York, N. Y.

**FLOWERS—ARTIFICIAL**

Adler-Jones Co.  
Chicago, Ill.  
American Import Co., The  
San Francisco, Calif.  
Poehlmann Bros. Co.  
Morton Grove, Ill.

**FEATHER FLOWERS**

DeWitt Sisters  
Battle Creek, Mich.

**GARDEN GLOVES**

National Glove Co.  
Columbus, Ohio  
(See Adv. on Page 145)

**GLOBES (GAZING)**

Express Body Corp.  
Crystal Lake, Ill.  
Mussog's Bird Store  
Philadelphia, Pa.  
Novelty Iron Works  
Sterling, Ill.  
Putnam's—Gold and Tropical Fish  
Buffalo, N. Y.  
Testrite Instrument Co.  
New York, N. Y.  
Western Stoneware Co.  
Monmouth, Ill.

**HANGING BASKETS**

Keller Pottery Co., Geo.  
Chicago, Ill.  
Michigan Wire Goods Co.  
Niles, Mich.  
(See Adv. on Page 81)  
Miller & Doing  
Brooklyn, N. Y.  
Pittsburg Pottery Co.  
Pittsburg, Kan.  
Raedlein Basket Co.  
Chicago, Ill.  
Savo Mfg. Co.  
Chicago, Ill.  
Uhl Pottery Co.  
Evansville, Ind.  
Western Stoneware Co.  
Monmouth, Ill.

**NOVELTIES**

American Import Co., The  
San Francisco, Calif.  
Electric Sprayit Co.  
South Bend, Ind.  
Putnam's—Gold and Tropical Fish  
Buffalo, N. Y.  
N. Shure Company  
Chicago, Ill.

**MUSHROOM SPAWN**

American Spawn Co.  
St. Paul, Minn.  
Chester County Mushroom Laboratories  
West Chester, Pa.  
Jacob, Inc., Edward H.  
West Chester, Pa.  
Lambert, L. F.  
Coatesville, Pa.

**SCOOPS**

Bronis, Jas. (Wooden—Seed and Potato)  
New York, N. Y.  
(See Adv. on Page 155)  
Michigan Wire Goods Co. (Wire)  
(Potato, Corn, Apple)  
Niles, Mich.  
(See Adv. on Page 81)

**SEED TESTING**

International Seed Service, Inc.  
New York, N. Y.  
(See Adv. on Page 145)

**SOIL TESTERS**

Dickinson Co., The Albert  
Chicago, Ill.  
Earp-Thomas Laboratories Corp.  
Bloomfield, N. J.  
Hellige, Inc.  
New York, N. Y.  
Kalo Company  
Quincy, Ill.

**TAPES—TYING**

Fricke Co., J. E. (Tapes—Tying)  
Philadelphia, Pa.  
Gaufrin Textile Co.  
Philadelphia, Pa.

**TREE PROTECTION**

Owens Co., J. L.  
Minneapolis, Minn.  
Tanglefoot Co., The  
Grand Rapids, Mich.

**TWINE-SEWING AND TYING**

Bemis Bro. Bag Co.  
St. Louis, Mo.  
(See Adv. on Page 5)  
Chase Bag Co.  
Cleveland, Ohio  
Southern Cotton Mills Agency  
Baltimore, Md.

**TYING MACHINES**

Bunn Co., B. H. (Package Tying Machines)  
Chicago, Ill.  
Felins Tying Machine Co.  
Milwaukee, Wis.  
National Bundle Tyer Co. (Vegetable)  
Blissfield, Mich.  
Tie Company, The  
Unadilla, N. Y.

**XMAS GREENS**

Carolina Fruit Co.  
Rose Hill, N. C.  
Chesmore Seed Co.  
St. Joseph, Mo.  
(See Adv. on Page 71)  
Conwell, Inc., H. Ernest  
Milton, Del.  
Jones, The Holly Wreath Man  
Milton, Del.  
Neilson, Knud  
Evergreen, Ala.  
Quality Seed House (Mistletoe)  
Chickasha, Okla.  
E. C. Robbins  
Pineola, N. C.

**XMAS TREE HOLDERS**

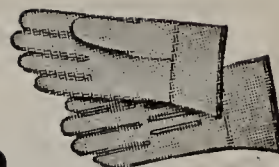
Arcade Mfg. Co.  
Freeport, Ill.  
Campbell-Hausfeld Co., The  
Harrison, Ohio  
Chesmore Seed Co.  
St. Joseph, Mo.  
(See Adv. on Page 71)  
Clark Mfg. Co., The  
Philadelphia, Pa.  
Interstate Specialty Co.  
North Manchester, Ind.



## Here's a New Type of Glove

Specially designed for

# GARDENING and General Home Use



Entirely different. Made from imported *leather* specially processed to render it amazingly *soft and pliable*. Permits almost barehand freedom with maximum comfort, yet provides *complete*, durable (all-leather) protection from dirt, scratching, scuffing and stains. Economical, long-lasting, **WASHABLE**. Useful the year round. An ideal home utility glove for both **WOMEN and MEN**. A real seller and the profit is liberal. Attractive display container provides effective tie-up with our national advertising. Write for complete information to

**NATIONAL**  
**Eazy Wear**  
**HOME GLOVES**

THE NATIONAL GLOVE CO., Columbus, Ohio, Dept. 20



An "Individual  
Hothouse"  
For Every Plant



Germāco

## Hotkaps

**GET CROPS TO MARKET  
3 WEEKS EARLIER**

Sell Hotkaps to your customers. They profit; you, too. Write for descriptive pamphlet and sample.

**GERMAIN'S**  
**HOTKAP MFG. DIVISION**  
741-747 Terminal Street,  
Los Angeles, Calif.

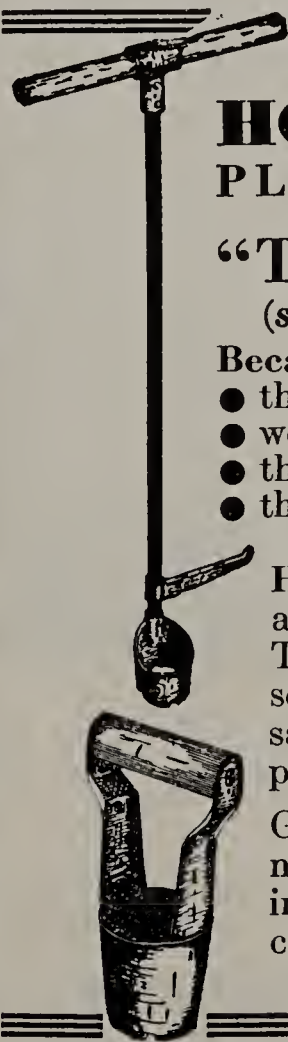
## Specialists in Foreign and Domestic Fields

Cable Address "SEEDTEST"

**SEED** **INTERNATIONAL** **SERVICE, INC.**

Analysis	Consultation
Purchasing	Arbitration
Selling	Opinions
Patents	Trademarks

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New York City  
Pent House Suite



## HOLE·IN·ONE PLANTING TOOLS

**"They Are Good"**  
(say dealers everywhere)

Because

- they are practical and simple
- we sell them in quantities
- they please our customers
- they make us real profit

HOLE-in-ONE tools make a hole in one operation. Thousands of them are being sold in conjunction with the sale of bulbs and the smaller potted plants.

Get in on this lucrative business NOW. Write for full information and free catalog cuts.

**THE STRAW PRODUCTS**  
**C O M P A N Y**  
1604 REAL ESTATE TRUST BLDG.  
PHILADELPHIA PENNSYLVANIA

## SEEDSMEN'S SUPPLIES

### ACCOUNTANTS AND ACCOUNTING SYSTEMS

Ernst & Ernst  
New York, N. Y.

### ADV. FOR SEEDSMEN

Benton Review Shop  
Fowler, Ind.  
DeLaMare Co., Inc., A. T.  
New York, N. Y.  
McFarland Publicity Service  
Harrisburg, Pa.  
Morse Co., A. B.  
St. Joseph, Mich.  
Pitts Studios, Inc. (Cuts and Photos)  
Rochester, N. Y.  
(See Adv. on Page 147)  
Rochester Litho. Co.  
Rochester, N. Y.

### APRONS

Atlantic Mfg. Co. (Leather)  
Wilmington, Del.  
Windermere Products Mfg. Co. (Rubber)  
Cleveland, Ohio

### BAG CLOSING MACHINES

Brown Bag Filling Machine Co.  
Fitchburg, Mass.  
(See Adv. on Page 153)  
St. Regis Paper Co.  
New York, N. Y.  
(See Adv. on Page 147)  
Savage Co., W. J.  
Knoxville, Tenn.  
Union Special Machine Co.  
Chicago, Ill.

### BAG FILLING MACHINES

Brown Bag Filling Machine Co.  
Fitchburg, Mass.  
(See Adv. on Page 153)  
Howes Co., Inc., S.  
Silver Creek, N. Y.  
(See Adv. on Page 155)  
Huntley Mfg. Co.  
Brocton, N. Y.  
Lehmann Co., Inc., J. M.  
New York, N. Y.  
(See Adv. on Page 147)  
National Packaging Machinery Co.  
Newtonville, Boston. Mass.  
Richardson Scale Co.  
Clifton, N. J.  
Sidney Grain Machinery Co.  
Sidney, Ohio  
Stokes & Smith Co., The  
Philadelphia, Pa.  
Union Special Machine Co.  
Chicago, Ill.

### BAG HOLDERS

Howes Co., Inc., S.  
Silver Creek, N. Y.  
(See Adv. on Page 155)  
Peters-Keystone Co.  
Omaha, Neb.  
Richardson Scale Co.  
Clifton, N. J.  
Sprout, Waldron & Co.  
Muncy, Pa.

### BAG MAKING MACHINES

Brown Bag Filling Machine Co.  
Fitchburg, Mass.  
(See Adv. on Page 153)

### BAG PILERS—CONVEYORS

Revolvator Co.  
Jersey City, N. J.

### BAG SEALS

Brooks Co., E. J.  
Newark, N. J.  
(See Adv. on Page 147)  
Porter Safety Seal Co.  
Chicago, Ill.  
(See Adv. on Page 155)  
St. Regis Paper Co.  
New York, N. Y.  
(See Adv. on Page 147)

### BAG STITCHING MACHINES

Savage Co., W. J.  
Knoxville, Tenn.  
Union Special Machine Co.  
Chicago, Ill.

### BAG TRIERS

Seed Trade Reporting Bureau  
Chicago, Ill.  
(See Adv. on Pages 117, 101, 129)

### BASKETS

Planters Mfg. Co., Inc. (Field Tomato)  
Portsmouth, Va.  
Standard Basket Co.  
Chicago, Ill.

### BEAN PICKERS

Ferrell & Co., A. T.  
Saginaw, Mich.  
Howes Co., Inc., S.  
Silver Creek, N. Y.  
(See Adv. on Page 155)  
Huntley Mfg. Co.  
Brocton, N. Y.

### BAGS—COTTON OR BURLAP

Bemis Bro. Bag Co.  
St. Louis, Mo.  
(See Adv. on Page 5)  
Bosworth Co., M. M.  
Memphis, Tenn.  
Chase Bag Co.  
Cleveland, Ohio  
Cincinnati Bag Co.  
Cincinnati, Ohio  
Cleveland Textile & Bag Co.  
Cleveland, Ohio  
Missouri Bag Co.  
St. Louis, Mo.  
Morrison & Risman Co.  
Buffalo, N. Y.  
National Bag Co.  
Naperville, Ill.  
National Bag Co., Inc.  
St. Louis, Mo.  
Southern Cotton Mills Agency  
Baltimore, Md.  
Wright Bag Co.  
Brooklyn, N. Y.

### BAGS—PAPER

Bemis Bro. Bag Co.  
St. Louis, Mo.  
(See Adv. on Page 5)  
Brown Bag Filling Machine Co.  
Fitchburg, Mass.  
(See Adv. on Page 153)  
Chase Bag Co.  
Cleveland, Ohio  
Disbrow Mfg. Co. (Satchel Bottom Bags and Packets)  
Newark, N. J.  
(See Adv. on Pages 151 and 153)  
International Paper Co.  
New York, N. Y.  
Miller, Tompkins & Co.  
New York, N. Y.  
(See Adv. on Page 149)  
St. Regis Paper Co.  
New York, N. Y.  
(See Adv. on Page 147)

## Better bag ties— quicker, tighter.



Just bend the looped wire tie around neck of bag, hook tying tool into both loops and pull. Your bag is virtually sealed—can't be opened without detection. You save time, do a better job with

### BATES WIRE TIES

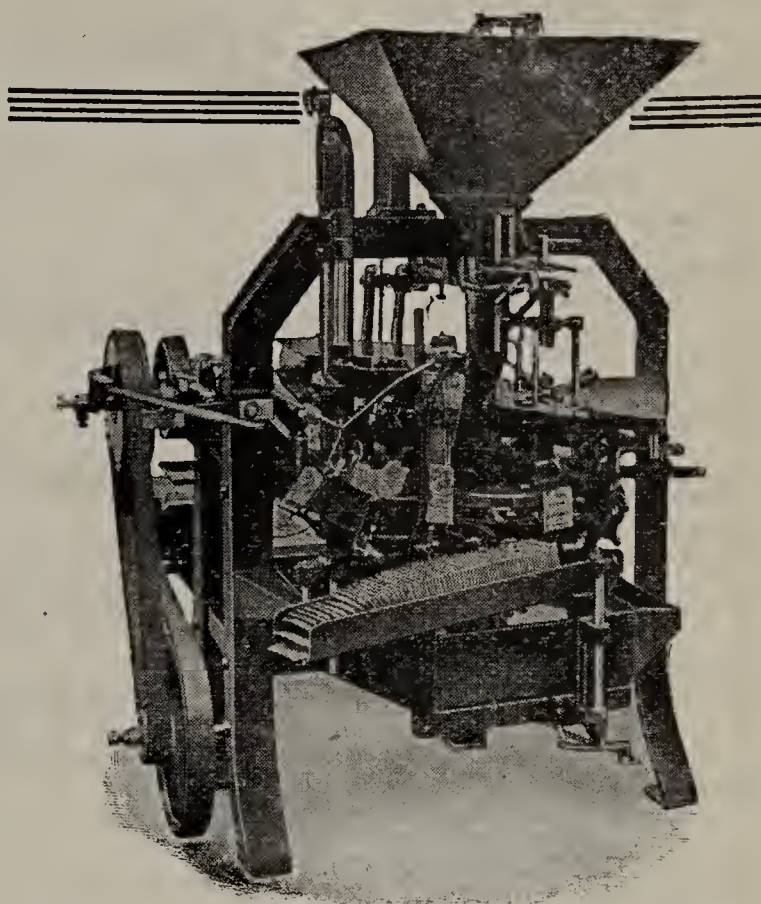
*Write for sizes, prices,  
free trial samples*

**St. Regis Paper Company**

*Bates Wire Tie Division*

60 East 42nd Street, New York, N. Y.

Buy the Montania for seed packeting.  
It will save you money.



Write to

**J. M. LEHMANN CO., INC.**

248 W. BROADWAY

NEW YORK, N. Y.



### GRIP-LOCK

*the foolproof*  
**SELF-LOCKING  
BAG SEAL**

The GRIP-LOCK is the very latest development in Bag Seals and is ideal for seedsmen's use. It prevents substitution and adulteration. After being once locked, relocking is impossible. It is also simple and easy to use as no machine is needed.

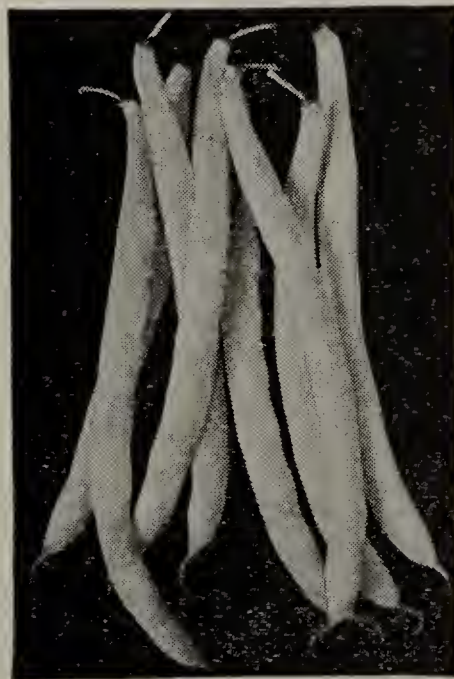
The lead pin bag seal SHOWN BELOW is another of the many types we manufacture for sealing seed bags.



*Write for Sample and Complete  
Information*

**E. J. BROOKS CO.**

164 North 13th St. Newark, N. J.



*Are*  
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on what is new in catalog illustration?  
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right up to the minute.

**PITTS STUDIOS, INC.**

HORTICULTURAL PHOTOGRAPHERS and ARTISTS

**ROCHESTER, NEW YORK**

## SEEDSMEN'S SUPPLIES—Continued

**BELTING**

Atlantic Mfg. Co. (Rubber and Leather)  
Wilmington, Del.

**BOX LABELS AND HANGERS**

Genesee Valley Lithograph Co.  
Rochester, N. Y.

(See Adv. on Page 149)

**BOXES—PARCEL POST**

Campbell Paper Box Co.  
South Bend, Ind.

Disbrow Mfg. Co.  
Newark, N. J.

(See Adv. on Pages 151 and 153)

Gereke-Allen Carton Co.  
St. Louis, Mo.

Hinde & Dauch Paper Co.  
Sandusky, Ohio

**CANNING EQUIPMENT—HOME**

Burpee Can Sealer Co.  
Chicago, Ill.

(See Adv. on Page 157)

**CANS—FIBRE AND TIN**

American Can Co.  
Chicago, New York and San Francisco

**CARTONS—PAPER**

Bird & Son  
East Walpole, Mass.

(See Adv. on Page 111)

Campbell Paper Box Co.  
South Bend, Ind.

Disbrow Mfg. Co. (Corrugated)  
Newark, N. J.

(See Adv. on Pages 151 and 153)

Galloway Lithographing Co.  
San Francisco, Calif.

Gereke-Allen Carton Co.  
St. Louis, Mo.

Stecher Lithographic Co.  
Rochester, N. Y.

(See Adv. on Page 157)

Weaver Mailing Env. & Box Co.  
Philadelphia, Pa.

Webster Co., Mel L.  
Independence, Ia.

**CARTONS—PRINTED**

Disbrow Mfg. Co.  
Newark, N. J.

(See Adv. on Pages 151 and 153)

Galloway Lithographing Co.  
San Francisco, Calif.

Genesee Valley Lithograph Co.  
Rochester, N. Y.

(See Adv. on Page 149)

Gereke-Allen Carton Co.  
St. Louis, Mo.

Stecher Lithographic Co.  
Rochester, N. Y.

(See Adv. on Page 157)

**CATALOG COLORED COVERS**

Excelsior Printing Co.  
Chicago, Ill.

Galloway Lithographing Co.  
San Francisco, Calif.

Genesee Valley Lithograph Co.  
Rochester, N. Y.

(See Adv. on Page 149)

Horticultural Press, Inc., The  
Chicago, Ill.

(See Adv. on Pages 67 and 68)

Kenfield Leach Co.  
Chicago, Ill.

McFarland Co., J. Horace  
Harrisburg, Pa.

Morse Co., A. B.  
St. Joseph, Mich.

Pitts Studios, Inc.  
Rochester, N. Y.

(See Adv. on Page 147)

Quality Print, Inc.  
Shelbyville, Ind.

Rochester Lithographic Co.  
Rochester, N. Y.

Stecher Lithographic Co.  
Rochester, N. Y.

(See Adv. on Page 157)

Wallace-Homestead Co.  
Des Moines, Iowa

**CATALOG ILLUSTRATIONS**

Pitts Studios, Inc.  
Rochester, N. Y.

(See Adv. on Page 147)

Rochester Litho. Co.  
Rochester, N. Y.

Wallace-Homestead Co.  
Des Moines, Iowa

**CATALOG PRINTERS**

American Colortype Co.  
Chicago, Ill.

Benton Review Shop (Stock Seed Catalogs)  
Fowler, Ind.

Byrd Press, Inc., The Wm.  
Richmond, Va.

DeLaMare Co., Inc., A. T.  
New York, N. Y.

Excelsior Printing Co.  
Chicago, Ill.

Horticultural Press, Inc., The  
Chicago, Ill.

(See Adv. on Pages 67 and 68)

Kenfield Leach Co.  
Chicago, Ill.

McFarland Co., J. Horace  
Harrisburg, Pa.

Morse Co., A. B.  
St. Joseph, Mich.

Process Color Printing Co.  
Rochester, N. Y.

Sheffield-Fisher Co.  
Rochester, N. Y.

Wallace-Homestead Co.  
Des Moines, Iowa

**CLEANING MACHINERY**

Burch Corporation, The  
Crestline, Ohio

Carter-Mayhew Mfg. Co.  
Minneapolis, Minn.

Cleland Mfg. Co.  
Minneapolis, Minn.

Eddy Seed Cleaners, Ltd.  
Toronto, Ont., Can.

Ferrell & Co., A. T.  
Saginaw, Mich.

Gruendler Crusher & Pulv. Co.  
St. Louis, Mo.

Howes Co., Inc., S.  
Silver Creek, N. Y.

(See Adv. on Page 155)

Huntley Mfg. Co.  
Brocton, N. Y.

Oliver Mfg. Co.  
St. Louis, Mo.

Owens Co., J. L.  
Minneapolis, Minn.

Rice, W. A.  
Jerseyville, Ill.

Sidney Grain Machinery Co.  
Sidney, Ohio

Sprout, Waldron & Co.  
Muncy, Pa.

Sutton, Steele & Steele, Inc.  
Dallas, Texas

(See Adv. on Page 19)

**COLOR REPRODUCTIONS FOR SEEDSMEN AND NURSERYMEN**

Horticultural Press, Inc., The  
Chicago, Ill.

(See Adv. on Pages 33a and 33b)

McFarland Co., J. Horace  
Harrisburg, Pa.

Pitts Studios, Inc.  
Rochester, N. Y.

(See Adv. on Page 147)

Process Color Printing Co.  
Rochester, N. Y.

**COMMERCIAL SEED TESTING**

Commercial Seed Laboratory  
Washington, D. C., and Toledo, O.

International Seed Service, Inc.  
New York, N. Y.

(See Adv. on Page 145)

ESTABLISHED 1894

# KRAFT SEED BAGS

## OF PROVEN MERIT

# WHITE P.K. EMBOSSED BAGS



# ATTRACTIVELY PRINTED FOR LAWN GRASS SEED

MANUFACTURED AND PRINTED BY

## Miller, Tompkins & Co.

16 DESBROSSES ST., NEW YORK

Miller,  
Tompkins  
& Co.,  
16 Desbrosses  
St., New York.  
Please send sam-  
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Name.....

Address.....

City or Town.....

# SEED PACKETS



CATALOG COVERS, BOX LABELS & HANGERS,  
FULL LINE OF STOCK IN BOTH FLOWER  
AND VEGETABLE PACKETS

*Write us for samples and prices*

GENESEE VALLEY LITHOGRAPH CO.  
ROCHESTER    -:    INC.    -:    NEW YORK

## SEEDSMEN'S SUPPLIES—Continued

## COPYRIGHTS

Ely & Pattison  
New York, N. Y.  
(See Adv. on Page 153)

## CORN GRADERS

Baier Bros. Mfg. Co.  
Cissna Park, Ill.  
Cleland Mfg. Co.  
Minneapolis, Minn.  
Ferrell & Co., A. T.  
Saginaw, Mich.  
Gruendler Crusher & Pulv. Co.  
St. Louis, Mo.  
Howes Co., Inc., S.  
Silver Creek, N. Y.  
(See Adv. on Page 153)  
Hannicutt Co., Chas.  
Wilmington, Ohio  
Huntley Mfg. Co.  
Brocton, N. Y.  
Maroa Mfg. Co.  
Maroa, Ill.  
Owens Co., J. L.  
Minneapolis, Minn.  
Richards & Sons, Ross V.  
North Manchester, Ind.  
Savage Co., W. J.  
Knoxville, Tenn.  
Sutton, Steele & Steele  
Dallas, Texas  
(See Adv. on Page 151)  
Universal Hoist & Mfg. Co.  
Cedar Falls, Iowa  
(See Adv. on Page 151)

## CORN SHELLERS

Duplex Mill & Mfg. Co., The  
Springfield, Ohio  
Gruendler Crusher & Pulv. Co.  
St. Louis, Mo.  
Howes Co., Inc., S.  
Silver Creek, N. Y.  
(See Adv. on Page 153)  
Union Iron Works  
Decatur, Ill.

## CORN SORTERS

Howes Co., Inc., S.  
Silver Creek, N. Y.  
(See Adv. on Page 153)  
Universal Hoist & Mfg. Co.  
Cedar Falls, Iowa  
(See Adv. on Page 151)

## CRACKED CORN CLEANERS AND GRADERS

Duplex Mill & Mfg. Co., The  
Springfield, Ohio  
Gruendler Crusher & Pulv. Co.  
St. Louis, Mo.  
Howes Co., Inc., S.  
Silver Creek, N. Y.  
(See Adv. on Page 153)  
Huntley Mfg. Co.  
Brocton, N. Y.  
Savage Co., W. J.  
Knoxville, Tenn.  
Sutton, Steele & Steele, Inc.  
Dallas, Texas  
(See Adv. on Page 151)  
Universal Hoist & Mfg. Co.  
Cedar Falls, Iowa  
(See Adv. on Page 151)

## CRUSHERS

Gruendler Crusher & Pulv. Co.  
St. Louis, Mo.  
Straub Co., The A. W.  
Philadelphia, Pa.  
Williams Patent Crusher & Pulv. Co.  
St. Louis, Mo.

## DUST COLLECTORS

Day Co., The  
Minneapolis, Minn.  
Gruendler Crusher & Pulv. Co.  
St. Louis, Mo.

Howes Co., Inc., S.  
Silver Creek, N. Y.  
(See Adv. on Page 153)  
Huntley Mfg. Co.  
Brocton, N. Y.  
Oliver Mfg. Co.  
St. Louis, Mo.  
Savage Co., W. J.  
Knoxville, Tenn.

## DUST PROTECTORS

Garnett, Herbert (Respirators)  
Maumee, Ohio

## ENVELOPES

Berkowitz Envelope Co.  
Kansas City, Mo.  
Brown Bag Filling Machine Co.  
Fitchburg, Mass.  
(See Adv. on Page 153)  
Cupples Envelope Co., Samuel  
(Eastern Division) New York, N. Y.  
Cupples Envelope Co., Samuel  
(Western Division) St. Louis, Mo.  
Disbrow Mfg. Co.  
Newark, N. J.  
(See Adv. on Pages 151 and 153)  
Gaw-O'Hara Envelope Co.  
Chicago, Ill.  
(See Adv. on Page 151)  
Heco Envelope Co.  
Chicago, Ill.  
(See Adv. on Page 151)  
Heinrich, Inc., John A.  
Minneapolis, Minn.  
Letalog Mailer Co.  
Chicago, Ill.  
Miller, Tompkins & Co.  
New York, N. Y.  
(See Adv. on Page 149)  
Tension Envelope Co., Inc.  
Brooklyn, N. Y.  
Weaver Envelope Co.  
Philadelphia, Pa.

## FEED GRINDERS

Anglo-American Mill Co.  
Owensboro, Ky.  
Duplex Mill & Mfg. Co., The  
Springfield, Ohio  
Fairbanks, Morse & Co.  
Chicago, Ill.  
Gruendler Crusher & Pulv. Co.  
St. Louis, Mo.  
McCarger Mfg. Co., L. B.  
North Kansas City, Mo.  
Patch, Inc., A. H.  
Clarksville, Tenn.  
Savage Co., W. J.  
Knoxville, Tenn.  
J. B. Sedberry, Inc.  
Utica, N. Y.  
Straub Co., The A. W.  
Philadelphia, Pa.  
Williams Patent Crusher & Pulv. Co.  
St. Louis, Mo.

## FEED PACKAGING MACHINERY

Ferguson Co., J. L.  
Joliet, Ill.  
Howes Co., Inc., S.  
Silver Creek, N. Y.  
(See Adv. on Page 153)  
Huntley Mfg. Co.  
Brocton, N. Y.  
National Packaging Machinery Co.  
Newtonville, Boston, Mass.  
Richardson Scale Co.  
Clifton, N. J.  
Stokes & Smith Co., The  
Philadelphia, Pa.

## FENCING

Buffalo Wire Works Co., Inc.  
Buffalo, N. Y.  
Continental Steel Corp.  
Kokomo, Ind.

# DISBROW

# SEAL BRAND



SIFT PROOF SEED PACKETS

SATCHEL BOTTOM BAGS

THE DISBROW MFG. CO.

::

NEWARK, NEW JERSEY

## Gaw-O'Hara Envelope Co.

500 No. Sacramento Blvd.

CHICAGO, ILL. Phone: Nevada 1200

*Offers a Complete  
Mailing Service*

### CATALOG ENVELOPES

Also a complete line of all sizes and styles of COMMERCIAL ENVELOPES.

### RETURNAFORM

Combination letterhead, return envelope and order blank.

### LETTERHEADS

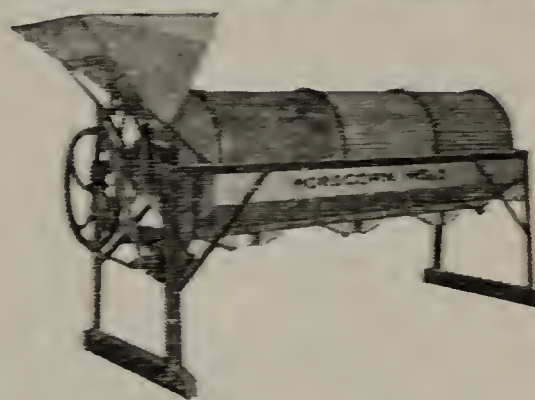
Either a new, modern artistic design, or a reprint of your present letterhead.

### DU-PLEX

Two Compartment Envelopes, Standard and special sizes.

*Consult our Direct-Mail Division* for better mail results. A free sketch gladly submitted . . . write or 'phone for prices and samples.

## THE MORECORN SEED CORN GRADER



Most efficient and accurate Grader for all varieties of Field Corn, Sweet Corn, Pop Corn as well as beans and other similar grains. Illustration above shows style No. 3, capacity 30 to 40 bushels per hour equipped with electric motor drive. Air Fan Cleaning attachment furnished if desired.

Also made in two smaller sizes with capacity of 6 or 12 Bu. per hour.

Morecorn Graders have been made and sold for the past 25 years, fully guaranteed subject to 10 days trial. Write for detailed information and prices.

### Universal Hoist & Mfg. Co.

183 E. 14th St. CEDAR FALLS, IOWA



## THE DAVIS "SELF SERVE"

Seed Packet Display Racks either Revolving or Combination Shipping and Display Cases, for the Wholesaler or Retailer, are the neatest, most compact, best built and inexpensive seed packet display fixtures on the market.

Illustrated Catalog on Request

DAVIS METAL FIXTURE CO., P. O. Box 2130, Lansing, Mich.

## SEEDSMEN'S SUPPLIES—Continued

## GERMINATORS

Bridges Mfg. Co.  
Bedford, Iowa  
Close-To-Nature Co.  
Colfax, Iowa  
Kny Scheerer Corp. of America  
New York City, N. Y.  
**Seed Trade Reporting Bureau**  
Chicago, Ill.  
(See Adv. on Pages 95-101)  
Specialty Mfg. Co.  
St. Paul, Minn.

## GRAIN CLEANERS

Ferrell & Co., A. T.  
Saginaw, Mich.  
**Howes Co., Inc., S.**  
Silver Creek, N. Y.  
(See Adv. on Page 155)  
**Sutton, Steele & Steele**  
Dallas, Texas  
(See Adv. on Page 19)

## GREENHOUSES

Callahan Co., T. J.  
Dayton, Ohio  
Foley Greenhouse Mfg. Co.  
Forest Park, Ill.  
Metropolitan Greenhouse Mfg. Corp.  
Brooklyn, N. Y.  
**Yoho & Hooker**  
Youngstown, Ohio  
(See Adv. on Page 111)

## HULLERS

Ferrell & Co., A. T.  
Saginaw, Mich.  
**Howes Co., Inc., S.**  
Silver Creek, N. Y.  
(See Adv. on Page 155)

## IRRIGATION SYSTEMS

Dayton Irrigation Co.  
Dayton, Ohio  
Martin Iron Works  
Los Angeles, Calif.  
White Showers, Inc.  
Detroit, Mich.  
X. L. Mfg. Co.  
Chicago, Ill.

## LABORATORY EQUIPMENT

**Bronis, Jas.**  
New York, N. Y.  
(See Adv. on Page 155)  
**Howes Co., Inc., S. (Model Cleaners, Etc.)**  
Silver Creek, N. Y.  
(See Adv. on Page 155)  
Huntley Mfg. Co.  
Brocton, N. Y.  
Kny-Scheerer Corporation of America  
New York City, N. Y.  
**Seed Trade Reporting Bureau**  
Chicago, Ill.  
(See Adv. on Pages 119-77-163)  
Specialty Mfg. Co.  
St. Paul, Minn.  
Straub Co., The A. W.  
Philadelphia, Pa.  
Torsion Balance Co.  
New York City, N. Y.

## LEGAL AID

Bebb, Herbert  
Chicago, Ill.  
**Ely & Pattison**  
New York, N. Y.  
(See Adv. on Page 39)  
Smith, Curtis Nye  
Boston, Mass.

## MIXERS—SEED OR FEED

Burch Corp.  
Crestline, Ohio  
Ellis Drier Works  
Chicago, Ill.  
Gruendler Crusher & Pulv. Co.  
St. Louis, Mo.  
**Howes Co., Inc., S.**  
Silver Creek, N. Y.  
(See Adv. on Page 155)  
Huntley Mfg. Co.  
Brocton, N. Y.  
Oliver Mfg. Co.  
St. Louis, Mo.  
Savage Co., W. J.  
Knoxville, Tenn.  
Sprout, Waldron & Co.  
Muncy, Pa.  
Straub Co., A. W.  
Philadelphia, Pa.  
Williams Patent Crusher & Pulv. Co.  
St. Louis, Mo.

## PACKET FILLING

**Brown Bag Filling Machine Co.**  
Fitchburg, Mass.  
(See Adv. on Page 153)  
**Lehmann Co., J. M.**  
New York, N. Y.  
(See Adv. on Page 147)  
National Packaging Machinery Co.  
Newtonville, Boston, Mass.

## PACKET FILLING MACHINES

Automatic Packaging Machinery Co.  
Nashua, N. H.  
**Brown Bag Filling Machine Co.**  
Fitchburg, Mass.  
(See Adv. on Page 153)  
Consolidated Packaging Machinery Corp.  
Buffalo, N. Y.  
Ferguson Co., J. L.  
Joliet, Ill.  
**Lehmann Co., Inc., J. M.**  
New York, N. Y.  
(See Adv. on Page 147)  
Packaging Machinery Co.  
Yonkers, N. Y.  
Stokes & Smith Co., The  
Philadelphia, Pa.

## PATENT ATTORNEY

**Ely & Pattison**  
New York, N. Y.  
(See Adv. on Page 39)  
Scheible, Albert  
Chicago, Ill.

## PAPER FOR CATALOGS

Collins Co., A. M.  
Philadelphia, Pa.  
International Paper Co.  
New York, N. Y.  
Kimberly-Clark Co.  
Chicago, Ill.  
Quality Print, Inc.  
Shelbyville, Ind.

## PAPER—MULCH

International Paper Co.  
New York, N. Y.

## PAPER—WRAPPING

**Disbrow Mfg. Co.**  
Newark, N. J.  
(See Adv. on Pages 151 and 153)  
International Paper Co.  
New York, N. Y.  
Safepack Mills  
Millis, Mass.

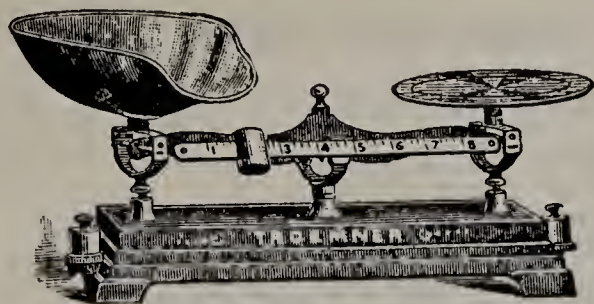


Fig. 39. AGATE SEED SCALE

# Henry Troemner

*Manufacturer*

Fine Balances, Scales,  
Weights for Testing  
and Grading of Seed,  
Grain, etc.

*Many Types for Many Uses*

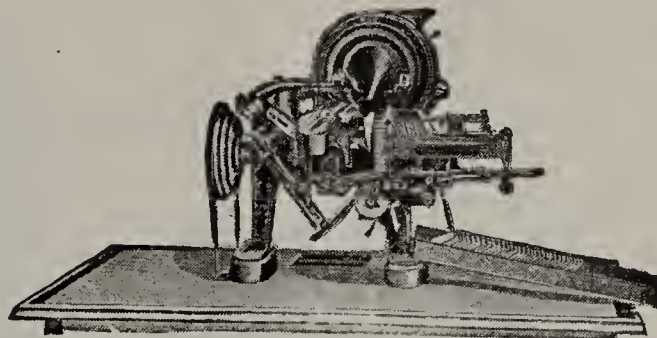
EST. 1840

CATALOG No. 1926 S

911 ARCH ST.

PHILA., PA.

## Save TIME & MONEY with BROWN SEED PACKET FILLERS



We manufacture a complete line of Return Envelopes, Seed Packets, Catalog Envelopes, Bag-Filling Machines for filling seeds in flat packets and Bag-Making machines. BROWN BAG FILLING MACHINES automatically fill flat packets with all varieties of seeds. Measure the seed. Fill the packet. Seal it tight. Require but one operator. Deliver 3,000 packets per hour. Reduce labor costs. Eliminate waste. Insure accuracy. Speed up orders.

*Write for Catalog C-30*

**THE BROWN BAG FILLING  
MACHINE COMPANY**

FITCHBURG

MASSACHUSETTS

## Direct to SEEDSMEN

Disbrow Satchel Bottom Bags, Disbrow Double Side Seam Packet, Disbrow Embossed Packet, Glassine Miniatures, Celery Bleachers, Metal Fold Mailing Envelopes, Catalogue and Commercial Envelopes, demand the best attractive printing—low prices.

Seal Brand Sift Proof Packets

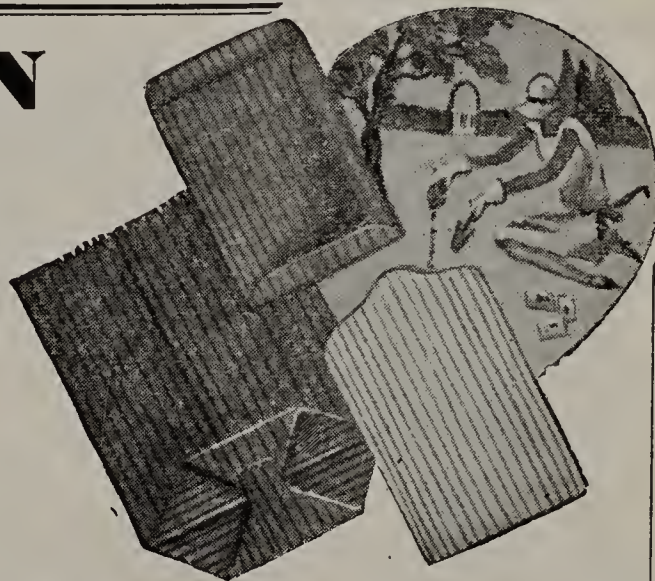
**THE DISBROW MANUFACTURING CO.**

*Paper Converters*

16-34 Nesbitt Street

::

NEWARK, N. J.



# Patronize those who made it possible to publish this Directory

*See Advertisers' Index on page 164*

## SEEDSMEN'S SUPPLIES—Continued

## POSTERS

- Galloway Lithographing Co., Inc.  
San Francisco, Calif.  
**Genesee Valley Lithograph Co.**  
Rochester, N. Y.  
(See Adv. on Page 149)  
Morse Co., A. B.  
St. Joseph, Mich.  
Quality Print, Inc.  
Shelbyville, Ind.  
**Stecher Lithographic Co.**  
Rochester, N. Y.  
(See Adv. on Page 157)

## POULTRY FEED MACHINERY

- Howes Co., Inc., S.**  
Silver Creek, N. Y.  
(See Adv. on Page 155)  
Huntley Mfg. Co.  
Brocton, N. Y.  
National Packaging Machine Co.  
Newtonville, Boston, Mass.  
Savage Co., W. J.  
Knoxville, Tenn.  
Williams Patent Crusher & Pulv. Co.  
St. Louis, Mo.

## SAMPLE CASES

- Hamilton Mfg. Co.  
Two Rivers, Wis.  
Heller & Co.  
Montpelier, Ohio  
Knickerbocker Case Co.  
Chicago, Ill.

## SAMPLE PANS

- Seed Trade Reporting Bureau**  
Chicago, Ill.  
(See Adv. on Pages 63-83)

## SCALES—AUTOMATIC

- American Machine & Foundry Co.  
Brooklyn, N. Y.  
**Bronis, Jas.**  
New York, N. Y.  
(See Adv. on Page 155)  
Exact Weight Scale Co., The  
Columbus, Ohio  
Fairbanks, Morse & Co.  
Chicago, Ill.  
Ferguson Co., J. L.  
Joliet, Ill.  
**Howes Co., Inc., S.**  
Silver Creek, N. Y.  
(See Adv. on Page 155)  
National Packaging Machine Co.  
Newtonville, Boston, Mass.  
Richardson Scale Co.  
Clifton, N. J.  
Stokes & Smith Co., The  
Philadelphia, Pa.  
Toledo Scale Co.  
Toledo, Ohio  
Triner Sales Co.  
Chicago, Ill.

## SCALES—COUNTER or PLATFORM

- Bronis, Jas.**  
New York, N. Y.  
(See Adv. on Page 155)  
Consolidated Packaging Mach. Corp.  
Buffalo, N. Y.  
Exact Weight Scale Co., The  
Columbus, Ohio  
Fairbanks, Morse & Co.  
Chicago, Ill.  
**Howes Co., Inc., S.**  
Silver Creek, N. Y.  
(See Adv. on Page 155)  
**Seed Trade Reporting Bureau**  
Chicago, Ill.  
(See Adv. on Page 163)  
Toledo Scale Co.  
Toledo, Ohio  
Torsion Balance Co.  
New York City  
**Troemner Co., Henry**  
Philadelphia, Pa.  
(See Adv. on Page 153)

## SCALES—LABORATORY

- Bronis, Jas.**  
New York, N. Y.  
(See Adv. on Page 155)  
Kny Scheerer Corp. of America  
New York City, N. Y.  
**Seed Trade Reporting Bureau**  
Chicago, Ill.  
(See Adv. on Page 163)  
Torsion Balance Co.  
New York City, N. Y.  
**Troemner Co., Henry**  
Philadelphia, Pa.  
(See Adv. on Page 153)

## SCARIFIERS

- Allis-Chalmers Mfg. Co.  
Milwaukee, Wis.  
Cleland Mfg. Co.  
Minneapolis, Minn.  
Duflecto Mfg. Co.  
Nevada, Iowa  
Eddy Seed Cleaners, Ltd.  
Toronto, Ont., Canada  
Ferrell & Co., A. T.  
Saginaw, Mich.  
**Howes Co., Inc., S.**  
Silver Creek, N. Y.  
(See Adv. on Page 155)  
Jensen, P. E.  
Nevada, Iowa  
Savage Co., W. J.  
Knoxville, Tenn.

## SCREENS

- Cleland Mfg. Co. (Sieves)  
Minneapolis, Minn.  
Erdle Perforating Co.  
Rochester, N. Y.  
**Howes Co., Inc., S.**  
Silver Creek, N. Y.  
(See Adv. on Page 155)  
Huntley Mfg. Co.  
Brocton, N. Y.  
**Seed Trade Reporting Bureau**  
Chicago, Ill.  
(See Adv. on Page 129)  
**Sutton, Steele & Steele, Inc.**  
Dallas, Texas  
(See Adv. on Page 19)

## SEALS

- Brooks Co., E. J.**  
Newark, N. J.  
(See Adv. on Page 147)  
**Porter Safety Seal Co.**  
Chicago, Ill.  
(See Adv. on Page 155)  
**St. Regis Paper Co.**  
New York, N. Y.  
(See Adv. on Page 147)

## SEED CASES

- Heller & Co.  
Montpelier, Ohio  
Manitowoc Building Supply Co.  
Manitowoc, Wis.  
Walker Bin Co.  
Penn Yan, N. Y.

## SEED CORN TESTERS

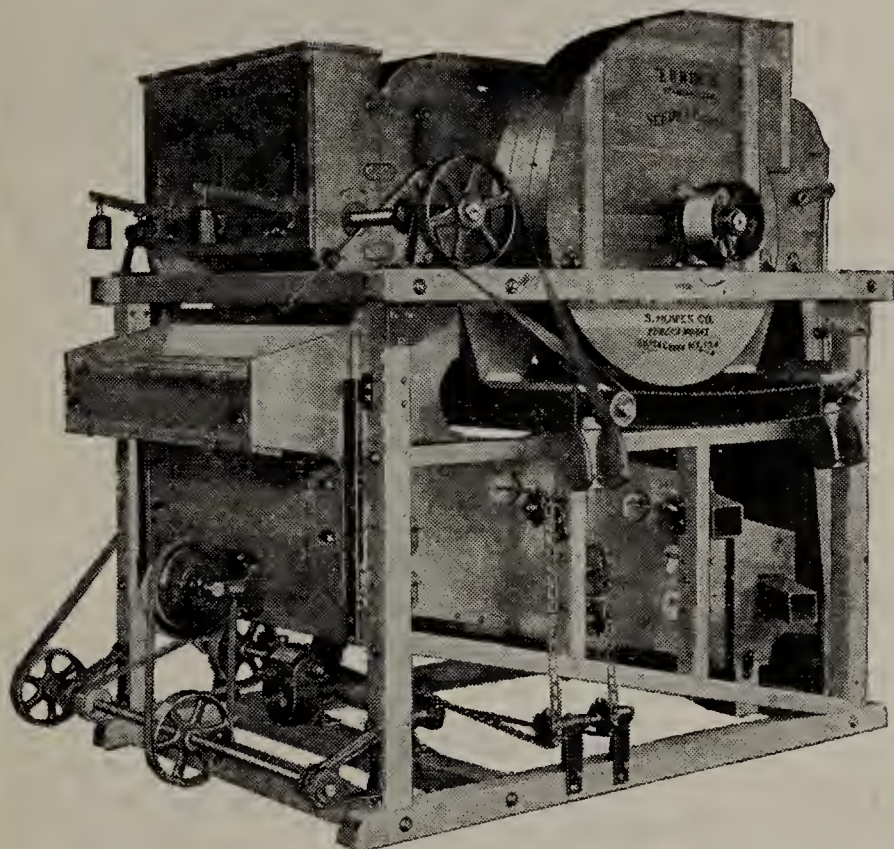
- Baier Bros. Mfg. Co.  
Cissna Park, Ill.  
Martin Co., The  
Des Moines, Iowa

## SEED DRIERS

- Ellis Drier Works  
Chicago, Ill.  
**Howes Co., Inc., S.**  
Silver Creek, N. Y.  
(See Adv. on Page 155)  
Martin Co., The  
Des Moines, Ia.  
Randolph Co., O. W.  
Toledo, Ohio  
Richards & Sons, Ross V.  
North Manchester, Ind.

*The Last Word in Improved Seed Cleaners*

# Eureka Standardized Seed Cleaner



PERFECT air separations.

ACCURATE and UNIFORM sieve separations, secured by the Buhler Drive.

EFFICIENT and SIMPLE sieve cleaners.

BALL BEARINGS throughout.

*Look up this IMPROVED Cleaner.*

S. HOWES CO., Inc.

SILVER CREEK, N. Y.

## SCALES FOR SEEDSMEN

FLORAL PARK

### SEED SCALES

FOOTED SCOOPS  
FOR PLATFORMS

AUTOMATIC  
PACKING MACHINERY

COUNTER SCALES

HEAVY DUTY  
SCALES

HAND TRUCKS

## JAMES BRONIS

*"The Scale Man"*

BOX 297, CITY HALL STATION  
NEW YORK CITY, N. Y.

**PROTECT YOUR  
SEED  
SHIPMENTS**



**The Porter Safety Seal—  
"The Seal That Seals"**

Gives positive assurance against adulteration or substitution.

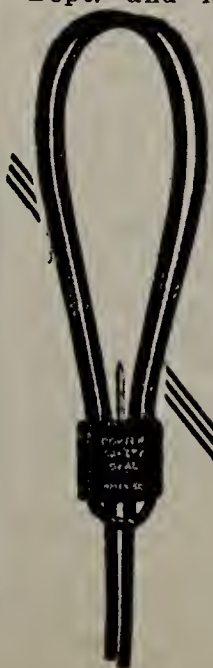
Meets every requirement of the P. O. Dept. and is universally used by banks for sealing shipments of coin and currency.

The Porter Safety Seal is the invention of Capt. Thos. I. Porter of the U. S. Secret Service. With one simple operation the pin is forced into folded neck of bag and cord is pulled tight. The seal is compressed, imprinting your name and address and crimping seal, thus sealing the bag securely in such a manner that it cannot be opened without destroying the seal or leaving unmistakable evidence of tampering.

Sample sealed bag and full information sent on request.

**Porter Safety  
Seal Co.**

269 N. California Av.  
Chicago



## SEEDSMEN'S SUPPLIES—Concluded

## SEED ENVELOPE SEALERS

Stokes & Smith Co., The  
Philadelphia, Pa.

SEED EXTRACTORS—SPIRAL  
ROUND

Howes Co., Inc., S.  
Silver Creek, N. Y.  
(See Adv. on Page 155)

## SEED PACKETS

Berkowitz Envelope Co.  
Kansas City, Mo.

Brown Bag Filling Machine Co.  
Fitchburg, Mass.  
(See Adv. on Page 153)

Disbrow Mfg. Co.  
Newark, N. J.  
(See Adv. on Pages 151 and 153)

Galloway Lithographing Co.  
San Francisco, Calif.

Genesee Valley Lithograph Co.  
Rochester, N. Y.  
(See Adv. on Page 149)

Heinrich, Inc., John A.  
Minneapolis, Minn.

Horticultural Press, Inc., The  
Chicago, Ill.  
(See Adv. on Pages 67 and 68)

Miller, Tompkins & Co.  
New York, N. Y.  
(See Adv. on Page 149)

Stecher Lithographic Co.  
Rochester, N. Y.  
(See Adv. on Page 157)

## SEED PACKET DISPLAY RACKS

Davis Metal Fixture Co.  
Lansing, Mich.

(See Adv. on Page 151)

Everitt's Convertible Display Case Co.  
Decatur, Ga.

Hamilton Mfg. Co.  
Two Rivers, Wis.

Heller & Co.  
Montpelier, Ohio

Horticultural Press, Inc., The  
Chicago, Ill.  
(See Adv. on Pages 67 and 68)

Knickerbocker Case Co.  
Chicago, Ill.

Manitowoc Building Supply Co.  
Manitowoc, Wis.

Walker Bin Co.  
Penn Yan, N. Y.

Webster Co., Mel. L.  
Independence, Iowa

## SEED POLISHERS

Goodner Pump & Mfg. Co.  
Rocky Ford, Colo.

Howes Co., Inc., S.  
Silver Creek, N. Y.  
(See Adv. on Page 155)

## SEED SAMPLE ENVELOPES

Bemis Bro. Bag Co.  
St. Louis, Mo.  
(See Adv. on Page 5)

Berkowitz Envelope Co.  
Kansas City, Mo.  
Cupples Envelope Co., Samuel  
St. Louis, Mo.

Disbrow Mfg. Co.  
Newark, N. J.  
(See Adv. on Pages 151 and 153)

Heco Envelope Co.  
Chicago, Ill.  
(See Adv. on Page 157)

Heinrich, Inc., John A.  
Minneapolis, Minn.

Miller, Tompkins & Co.  
New York City, N. Y.  
(See Adv. on Page 149)

National Bag Co.  
Naperville, Ill.

Ontario Co.  
Chicago, Ill.

Stecher Lithographic Co.  
Rochester, N. Y.  
(See Adv. on Page 157)

Tension Envelope Co., Inc.  
Brooklyn, N. Y.

Weaver Mailing Envelope & Box Co.  
Philadelphia, Pa.  
Western Envelope Co.  
Kansas City, Mo.

## SEED THRESHERS

Allis-Chalmers Mfg. Co.  
Milwaukee, Wis.  
Caledonia Bean Harvester Works  
Caledonia, N. Y.

Case Co., J. I.  
Racine, Wis.

Goodner Pump & Mfg. Co.  
Rocky Ford, Colo.

Gray's Sons, Inc., A. W.  
Poultney, Vt.

Howes Co., Inc., S.  
Silver Creek, N. Y.  
(See Adv. on Page 155)

International Harvester Co.  
Chicago, Ill.

Koger Pea & Bean Thresher Co.  
Morristown, Tenn.

Owens Co., J. L.  
Minneapolis, Minn.

## SHIPPING TAGS

Campbell Paper Box Co.  
South Bend, Ind.  
Cupples Envelope Co., Samuel  
St. Louis, Mo.

Dennison Mfg. Co.  
Framington, Mass.

Disbrow Mfg. Co.  
Newark, N. J.  
(See Adv. on Pages 151 and 153)

Quality Print, Inc.  
Shelbyville, Ind.

Quality Tag Works  
Franklin, Ind.

## SIEVE DRIVES

Howes Co., Inc., S.  
Silver Creek, N. Y.  
(See Adv. on Page 155)

## STORE FIXTURES

Davis Metal Fixture Co.  
Lansing, Mich.  
(See Adv. on Page 151)

Heller & Co.  
Montpelier, Ohio  
Manitowoc Building Supply Co.  
Manitowoc, Wis.

National Cash Register Co.  
Dayton, Ohio

Walker Bin Co.  
Penn Yan, N. Y.

## TRADE MARK REGISTRATIONS

Ely & Pattison  
New York, N. Y.  
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Scheible, Albert  
Chicago, Ill.

## TRUCKS—WAREHOUSE

Bronis, Jas.  
New York, N. Y.  
(See Adv. on Page 155)

Chase Foundry & Mfg. Co.  
Columbus, Ohio

Nutting Truck Co.  
Faribault, Minn.

Steubing Truck Co.  
Cincinnati, Ohio

WATER PUMPS—AUTOMATIC  
ELECTRIC

Illinois Supply Co.  
Aurora, Ill.  
(See Adv. on Page 133)

WRAPPING MACHINES—AUTO-  
MATIC

American Machinery & Foundry Co.  
Brooklyn, N. Y.

Ferguson Co., J. L.  
Joliet, Ill.

Lehmann Co., Inc., J. M.  
New York, N. Y.  
(See Adv. on Page 147)

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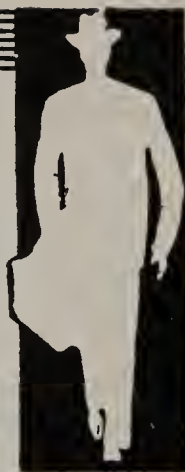
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## EDITORIAL INDEX OF SEED WORLD—1932

*For our readers' convenient reference a topical index of the most important articles published in Seed World from January to November, inclusive, during 1932 is given below. Copies of any particular issue (while the supply is available) may be procured by addressing a request to Seed World, Editorial Department, 325 West Huron St., Chicago, Ill. Price 15 cents per copy.—Ed.*

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in

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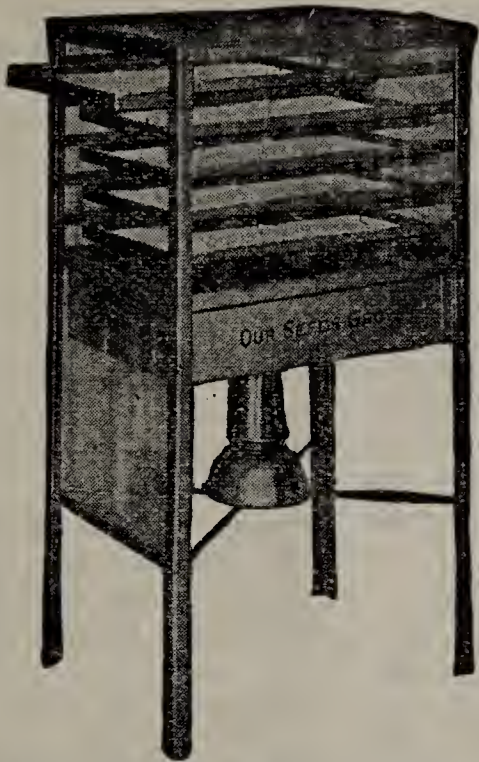
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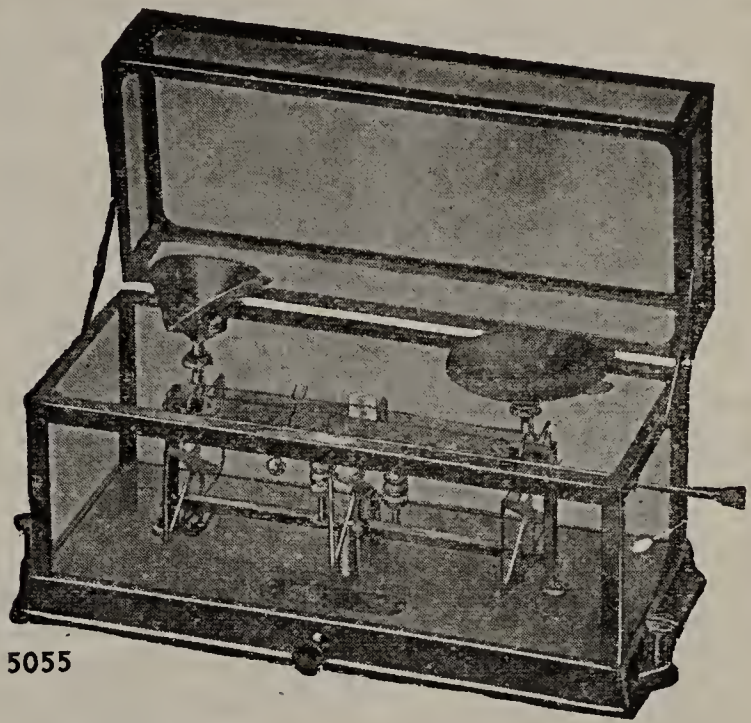
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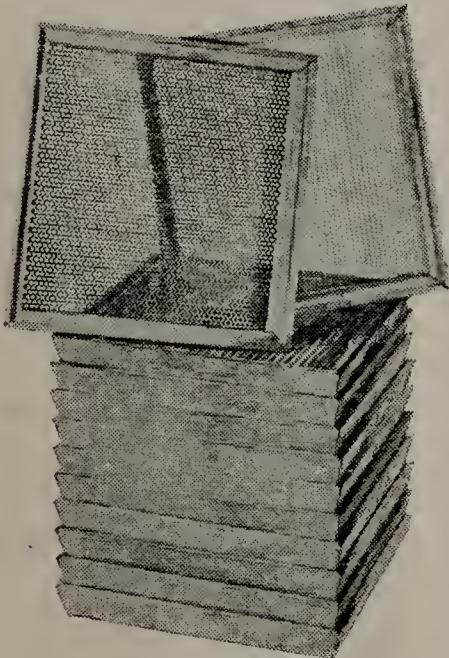
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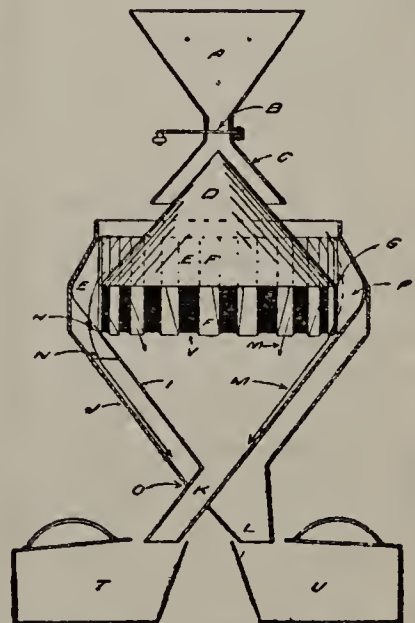
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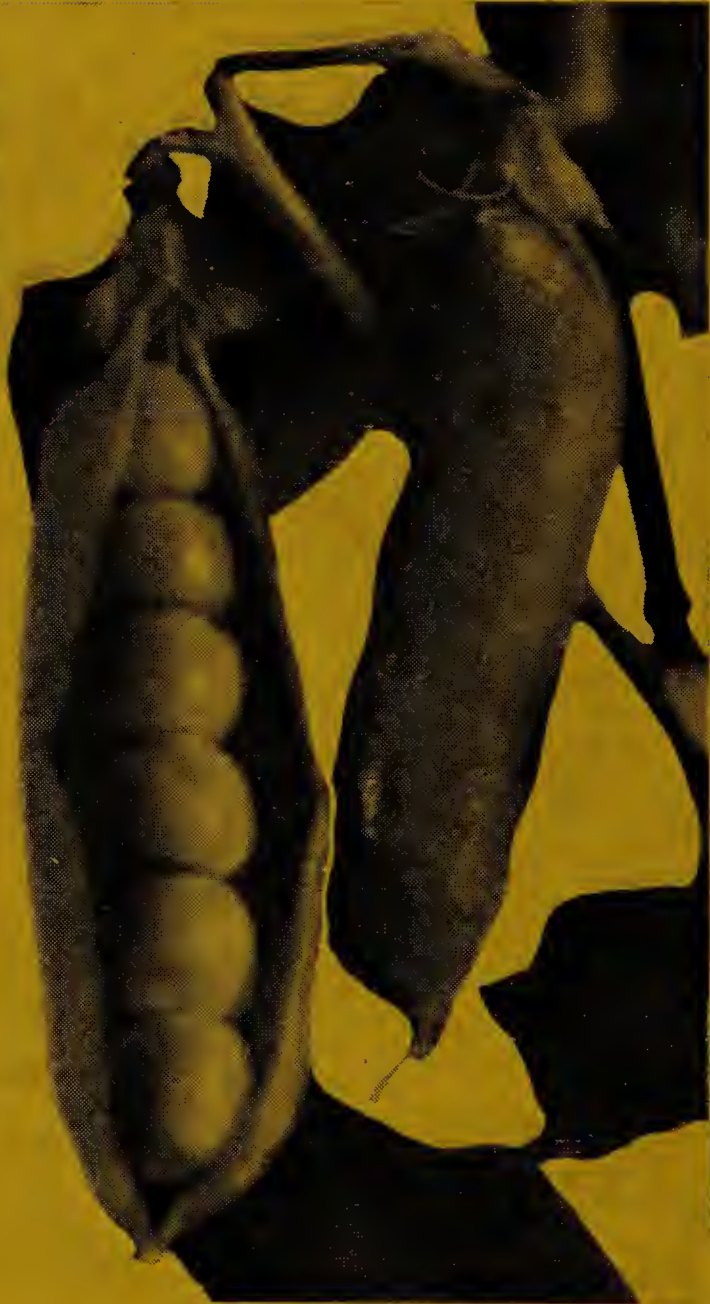
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